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ComputerWeekly

Thursday, October 13, 1983

PT7 cuts costs

FERRANTI
Computer Systems

IBM urged to be true OEM supplier

by John Kavnnagh

UK systems houses are pressing IBM to become a true OEM supplier, offering its entire range through third parties. They believe using the name of the world's dominant computer manufacturer would bring them big business but without destroying the competition.

Early this year IBM offered software houses sales leads to follow up with their own software and IBM hardware. If orders materialise IBM pays the third party around 10% of the hardware value. This scheme applies to most computers up to the 4331 medium-sized mainframe.

But software firms are now calling for proper OEM agreements such as those offered by minicomputer firm Digital Equipment, which has always done half of its business through third parties. They want to be able to buy large numbers of IBM computers at good discounts and sell hardware and software packages to users. And they want access to mainframes above the 4300 range.

"We're telling IBM that we stick to the ethics of third-party selling," said Data Logic marketing director Mike Brinsford. "If it's an existing IBM user then IBM would take the computer part of the order. But if it was a new firm we would like to sell kit.

"Working with IBM is very attractive: it's the market leader, it's aiming at major UK companies and the work is in leading areas such as distributed processing. UK firms are really making a go of the existing arrangements."

Brinsford said IBM was "taking real strides" to meet the software firms' wishes. But no agreements had been reached. "IBM would need to change the style of its business," he said. "But we're talking about getting more business for ourselves and for IBM."

He said such a move by the company which has 60% of the world market would not distort the business. "No one would want that to happen," he said. "Competition is healthy for everyone."

In the US the services industry organisation Adapso has been pressing IBM for such OEM agreements in the last few months. But Brinsford said the UK's Computing Services Association was not co-ordinating a campaign here.

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SHONE . . . "This will be big business."

Thorn pushes deeper into DP

by John Kavanagh

THE huge UK group Thorn EMI pushed further into the computing business last week by forming a software products firm with plans to almost double its staff and take over at least one US company by March.

Thorn EMI Software will start with financial packages taken on by Thorn EMI's bureau, Datasolve, from US firm American Management Systems in June, plus systems software products from defunct UK firm Altergo, acquired early this year.

But it plans to cover the whole market, from microcomputers to mainframes. As chairman Mike Shone put it: "This will be a big business. Thorn EMI isn't interested in firms doing less than £5 million a year. We will become very big indeed over the next five years."

Initially the staff is 70 people drawn from Datasolve's packages unit and Altergo. By March the number is expected to be 120. US turnover next year is forecast at anything between £3 million and £10 million and the UK will be "a bit bigger".

Shone said eventually the US would be the main part of the business. Thorn EMI Software has a ready-made operation in the US in the form of Altergo's offices.

Products will come from internal development, takeovers and distributorships. "We're not proud," said Shone.

He added: "Despite our plans we won't be going too fast. It would be easy just to take on masses of products but we must have a proper plan."

Shone is also managing director of Thorn EMI's six Software Sciences subsidiary. Shone said that company was not affected by the regrouping as it was mainly a consultancy and systems house.

Datasolve director Keith Harpham is managing director of the new firm and David Gearing, head of Datasolve's packages unit, has become marketing director.

This move further confirms Thorn EMI's belief that electronics and computing will form one of its main cornerstones for the future.

Sir Clive gives himself a million

by Philip Hunter

SIR Clive Sinclair has paid himself a £1 million bonus, on top of his £13,000 salary for the year ending March 1982.

He needed extra money for a second home in London, which is now being built in a Knightsbridge mews for £400,000.

The house is being built by top specialist in luxury dwellings John Willmott, and will include a roof top conservatory and underground swimming pool. The company headquarters of Sinclair Research is in Cambridge, where Sir Clive has his first home.

But for some time he has spent most of his working week in London at the company's advanced products division. Sir Clive took a drop in remuneration for the year ending March 1983, being content just with his salary of £82,000.

But he will have a far greater fortune to play with when his company goes public as he intends in the next year or so. He owns 85% of the shares, and the company was capitalised at £135 million when 10% of the shares were sold off to institutional investors in February 1983.

Sir Clive invested the £13.6 million raised then in his privately owned Sinclair Vehicle Project, which is not part of Sinclair Research. Sinclair has the ambition of building the first commercially viable electric car.

Meanwhile Sinclair Research has launched Sir Clive's other innovation, the flat screen TV, which costs about £70, making it at present much cheaper than Japanese rivals.

Ace and Filetab agree their court case

by John Kavanagh

A SIX-FIGURE settlement brought an early end to Filetab Support Services' High Court action against Ace Microsystems this week – with both sides claiming satisfaction with the result.

Filetab alleged that Ace had used Filetab's RPL language in its own D language and Lex-11 word processing package. Ace said RPL was used in the original version of Lex-11 but not in new versions of that package or in D. The older versions were now discontinued, Ace said.

Part of the settlement, thought to be around £100,000, covers RPL royalties from sales of that first version of Lex-11.

Filetab managing director Ritchie McGladdery said: "Our strong legal action to protect our heavy investment in our software has been vindicated."

Ace managing director Tom Barnard said his company settled because the dispute had held up a $1 million deal with Digital Equipment. The world's number two computer manufacturer has ordered 1,000 copies of Lex-11 to run on its Professional personal computer. Barnard said the order would help pay for the settlement.

Filetab has not finished with the courts. It is suing the National Computing Centre for alleged non-payment of royalties on sales of the NCC's Usertab and FSS languages. Meanwhile the NCC is to sell Ace's new D language.

McGLADDERY . . . "Vindicated."

Acorn isn't rushed by potential investors

by Philip Hunter

ACORN Computers has failed to attract the expected rush of buyers for its shares on the Unlisted Securities Market (USM), despite continuing runaway sales of home computers and the promise of even better financial results this year.

The offer of 11.23 million shares to raise £13.5 million was only just taken up, and city analysts expect the shares to fall below the minimum tender price of 120p when trading begins.

The Acorn share issue attracted the expected private investors interested in making a quick profit. But institutional investors such as the pension funds spurned the offer because of increasing fears about the long term prospects in the home computer business.

City financiers are nervous of micro makers following a crop of poor results from companies like Mattel in the US, where margins have been hit by a cut price war. "Everyone's aware that the bubble can burst," says Sue Sharpe of brokers Albert E. Sharpe.

"It's a pity the Acorn issue could not have been brought forward a couple of months," Sharpe adds.

Analysts are dubious about Acorn's prospects in the US, where the company has plans to enter the business market.

IBM and Hitachi settle

by Keith Holder

IBM AND Hitachi last week agreed an out of court settlement over the civil suit brought against Hitachi for stealing confidential IBM documents relating to the Adirondack development, part of the plans for the 308X and extended architecture (XA).

The terms of the settlement include payment of a "significant" sum by Hitachi, an undertaking by them not to use any stolen secrets and the right for IBM to inspect any new Hitachi products over the next five years.

Any disputes over this last point, which could be potentially damaging to Hitachi's future mainframes, will be referred to an independent panel of arbitrators.

In addition, the stolen documents will be returned and Hitachi will disclose the names, addresses and business affiliations of anyone who attempted to sell them IBM secrets. All legal and other costs, estimated to be several million dollars, will be met by Hitachi.

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ComputerWeekly

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Reagan declares emergency

by George Black

PRESIDENT Ronald Reagan, declaring a national emergency, has taken personal control of technology exports to Russia and the rest of the eastern Bloc.

The move shows how seriously Reagan takes the issue of technology transfer from West to East, and comes after months of bickering between the US Departments of Commerce and Defence as to which agency should control US export licences.

European computer firms are concerned because many, like ICL, buy US components to incorporate in products for re-export to countries which the US regards as "unsafe".

Reagan's unusual declaration of a national emergency was forced upon him by the expiration last Friday of the Export Administration Act, the US law which is the authority for the country's export control. The last time emergency powers were invoked was the Iranian hostage crisis.

The taking of the new powers, which imply there is an extraordinary threat to national security, could sharpen hostility of the critics of the US government to its hard line policy on trade. So far the response has been muted, but a Trade Department official in London speculated that the act "could stoke up the fires of resentment" among America's allies.

Last week the undersecretary of state for export administration, Larry Brady, resigned from the Commerce Department for what he described as personal reasons. But Brady, who has supported strict restrictions on the export of US technology, is believed to have left because of disagreements with his superiors who wish to take a less hard-line stance.

Until he resigned as Trade and Industry Secretary, Cecil Parkinson was due to visit the US this week to discuss trade issues. The subject will be high on the agenda of his successor, Norman Tebbit.

BRADY . . . Resigned.

Victor suspends shares

by John Kavonagh

VICTOR Technologies' financial problems took a new turn last week when the US microcomputer manufacturer suspended trading of its shares. A new agreement was reached over the weekend with Victor's bank, Security Pacific, and its main shareholder, industrial products group Kidde, which owns 43%, and trading in the shares was expected to start again this week.

Meanwhile it emerged that Victor's UK partner, Applied Computer Techniques (ACT), has opened a US office to talk directly to distributors there about its Apricot computer. Originally Victor was to be ACT's US outlet.

Victor's problems came to a head last Thursday when disc drive manufacturer Tandon revealed that Victor owed it $12 million for deliveries.

A disc controller firm, Xebec, then announced that it was owed $2.7 million. Victor's shares, which had halved in value in a week, dropped another $1.25 to $2.50 and trading was stopped.

Earlier this year Victor reported losses of $11.1 million in the second quarter. It has laid off well over 1,000 staff this year, cutting the total by almost half to under 1,500.

Announcing the new agreement, Victor said its problems had been caused by "market miscalculations and competitive pressures". Its restructuring was now largely complete and it had started explaining its position and plans to creditors.

Victor builds the Sirius, said to be the best-selling business microcomputer in the UK. ACT takes 40% of the company's output.

ACT financial director David Hadley said he was sure Kidde would not let the company go out of business.

All the same ACT is protecting its future. It is negotiating rights to manufacture the Sirius at its new factory in Glenrothes, Scotland.

Alvey will take on satellite experiment

by Keith Holder

PROJECT Universe, the publicly backed experiment to link satellites and local area networks, will be taken over by the Alvey Programme next November.

The proposal for Alvey to take over the second phase of the remote data link project will be considered at the end of this month, and is almost certain to be accepted, said Brian Oakley, director of the Alvey Programme.

The move to Alvey control was revealed by Sir Geoffrey Allen in a speech at the Royal Society's annual Philips lecture last Thursday. Allen, who is past chairman of the Science and Engineering Research Council (SERC), and now director of engineering at Unilver, cited Project Universe "as an outstanding example of collaboration between industry and academic at a high technical level, highlighting the elements of good practice."

Allen then off-handedly remarked that Universe would be moving under the Alvey umbrella.

Oakley said Allen was "slightly in advance of himself in announcing the changeover". But he added that the original Project Universe team would be visiting the Alvey Directorate this month.

"We shall be looking at supporting some parts, or perhaps all of it, as part of a Universe Two programme." That would tie in with Alvey's general support for advanced networks.

Project Universe is a £4 million experiment between universities and industry to develop fast data rate communications between remote networks using a satellite.

It had its origins in nuclear research, where universities operating Cambridge ring local networks were able to link up via satellite.

The project was coordinated by the SERC and involved the Rutherford Appleton laboratories, Logica, GEC-Marconi and British Telecom.

Seven sites are linked at present for three hours a day through the Orbital Test Satellite (OTS). The completed system went on show earlier this year at London's Barbican Centre where Junior Education minister William Shelton said that the project should go commercial to continue.

Oakley thinks that the second phase of the project could involve splitting the idea into sections.

That would allow some aspects of the network to be concentrated on the establishment of individual networks for key research laboratories.

"Anywhere that requires megastream communications could benefit," he added.

The project has so far received 70% public funding, with British Telecom covering the cost of the OTS connection.

ALLEN . . . . Premature announcement.

IBM profits rise 25% to $1.3bn

IBM'S profits were up 24.9% at $1.3 billion on total turnover of $9.4 billion for the third quarter ending September 30. Chairman John Opel said that soaring hardware sales of $5.29 billion, up 40% on the same period last year, and higher profit margins were the chief reasons for the increased profits.

Income from services was also up by 15.1% to $1.89 billion, but rental revenue was down 19.7% to $2.22 billion, as the trend toward outright purchase of hardware continues.

NewBrain rights

DUTCH distributor Tradecom International has bought the rights for the portable NewBrain micro, following last month's liquidation of Grundy Business Systems, which developed the machine in the UK. But the machines will still be built in the UK by Thorn EMI Datatech, which made them for Grundy.

Bull swells capital

LATELY reorganised French national computer firm Cii-Honeywell Bull is to swell its capital by FFr1.6 billion – thus reducing the share held by the American Honeywell company from around 20% to just 7%. The new Bull group, comprising 26,000 staff, will increase its capital from FFr861 million to 2.46 billion.

HP aims at Italy

HEWLETT-Packard is to collaborate with Telettra, Fiat's telecommunications subsidiary, and gain a firmer foothold in Italy. The agreement, reached last week, will also help Telettra to compete more effectively with Olivetti, Italy's leading computer company.

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HOW CAN YOU MAKE AN INTELLIGENT DECISION WITHOUT US?

United's last shares go to Data Recording

by George Black

PUBLICLY-owned Data Recording Instrument, the peripherals firm which is parent of Newbury Data, will buy the remaining share of United Peripherals that it does not already own.

The decision stems from a difference of view of the market between Data Recording and the American mainframe manufacturer, Control Data Corporation, which is United's other main customer.

Data Recording previously owned 76% of United and has now decided to take over the other 24%.

"It'll be nice to have it totally under our own control, so we can manage it ourselves and determine exactly what it makes," said Data Recording's group finance director Tony Alcock.

ARMSTRONG . . . "Acquisition will increase manufacturing capacity".

United was set up to make disc drives for Data Recording and for CDC, but it had found it wanted different products, said Alcock. CDC has several other factories, both in Europe and the US.

Data Recording will use its new control over United to speed up its move into the 5¼in fixed and removeable Winchester disc field.

The 24% which Data Recording is taking up used to belong to the Minneapolis company, Magnetic Peripherals Inc.

Data Recording is in the process of anglicising an American design for the 5¼in disc which it has licensed and plans to put it into production early next year. Group managing director John Armstrong said the acquisition of the extra shares would dramatically increase Newbury's manufacturing capacity.

Micro makers bid for Alvey cash

by Caroline Burgess

BRITISH micro makers this week put their case for Alvey cash for development to the Department of Trade and Industry.

"The Alvey programme was set up to meet the financial needs of the industry so we could compete with the rest of the world," said Nigel Smith, vice chairman of the BMMG. "But no small companies are directly involved and we want an active role.

"The theme of the programme is to develop the initiative and design potential of British industry and a lot of that is locked into small companies. They have been under financed but proved their case and now deserve a certain amount of aid."

However, Brian Oakely, director of the Alvey Programme, said: "I am not certain there is a place in the programme for small companies as micro manufacturers, but as some of them move up then they have a part to play in it.

"Alvey is not an applications project – it is concerned with underlying technology and most small firms are not doing research in that area. But, that does not rule them out from taking any part in it," said Oakely.

According to Smith, this is what small micro manufacturers had feared. "The net result of this could be that we will not have a British micro industry in the future. It will go the same way as the motor industry."

Smith argued that a few million pounds would cover the whole of the micro industry – a [illegible] proportion of the money allocated to Alvey. At the moment nothing was going towards aiding small companies which were sinking a lot of their own money into research and development, he claimed.

"We always thought there was a place for us," said Smith. "We are doing a lot of research for the future. Micros are in constant need of re-designing".

Smith was asked to put forward the BMMG's views on the [illegible] report by the Confederation of British Industry to a Department of Trade and Industry conference this week.

Mercury goes for experience as top RAF man takes over

by Donald Kennett

MERCURY Communications' new chairman was named this week as Air Chief Marshal Sir Douglas Lowe, 61, who retired as head of procurement at the Ministry of Defence in June.

He will replace Sir Michael Edwardes, who goes to ICL at the end of the year. The post will continue to be part-time and non-executive.

When Edwardes' departure was announced last month, a Mercury spokesman said that his government contacts had been invaluable during the start-up phase. Lowe will bring comparable experience as the company moves into its operational phase.

Unlike Edwardes, Lowe's recent responsibilities have included directly relevant technology. As MoD procurement chief he has overseen the start of a revolution in military communications, involving the change from analogue to digital systems, the trend towards distributed control, and the incorporation of processing techniques, such as encryption, into a wide range of voice and data services.

The military has also expanded its use of tactical telecommunications. It has increasingly moved towards setting up its own networks, including global networks based on satellites, independently of the civilian telecommunications authorities.

Lowe was responsible for the development and general management of major defence electronic communications systems and projects. Many of the suppliers of military communications systems are also telecommunications suppliers. They include GEC, Plessey, Racal, ITT, Philips, Siemens, Sperry, Harris, Rockwell-Collins and AEG-Telefunken.

Lowe said he was "particularly pleased to have this opportunity to join Mercury at this time. The company has made great strides in its launch phase and I look forward to assisting in the further development of this major venture which is so important for Britain".

Mercury's short history has been beset with problems. The appointment of a retired person to chair the company raises the thought that his career would suffer a less significant setback than a younger person's if the company were to fail.

But Mercury sales director Stuart Bailey said: "The position he was in meant that he would

LOWE . . . "Mercury has made great strides."

have had to retire before he took up any private industry position. And most chairmen of multi-million pound organisations are seeking experienced people in their fifties and sixties."

Bailey added that, far from regarding Mercury as a shaky operation, most people took the view that Mercury was amazingly lucky to be backed by the government and by major industrial partners with almost bottomless purses.

Aggressive IBM is beating PCMs for European market

by Keith Holder

IBM is winning the battle for European market share, and will continue to do so at the expense of its plug-compatible rivals, according to a Frost and Sullivan report, *The IBM Market in Europe*.

Shortened product cycles, and the ability to outclass competitors on research and development are among the factors behind this trend. These are coupled with the company's release from the US anti-trust suit which, says Frost and Sullivan, means "the company is now accelerating its level of market aggression".

The face of IBM is changing, spurred by increasing competition from Japan and the revamped AT&T operation which is pushing the company towards intense product development, entry to new markets, flexible pricing policies and a more co-operative attitude to secondary suppliers and value-added houses.

Against these attempts to gain an even larger slice of markets which IBM largely dominates already, says Frost and Sullivan, the plug-compatible manufacturers (PCMs) can do little except try to establish market niches where they are seen as providing more complete products or better services.

"At stake is a market for data processing hardware worth nearly $6 billion in 1982 shipments," which, according to estimates in the report, will rise to above $16 billion by 1987.

The conflict between IBM and the PCMs has become most apparent, according to Frost and Sullivan, in the large-scale systems sector. Traditionally, high profit margins and a conservative product development policy gave other suppliers the chance to compete effectively.

Fortunately for IBM only Amdahl and National Advanced Systems have become well established in Europe, and the release of the upgradable 3083 range came as a body blow to Olivetti, BASF and ICL, the report concludes.

The IBM 308X architecture, the king-pin of its big mainframes, forms a market estimated to be worth $3 billion between now and 1987.

Other suppliers will find it increasingly difficult to get a share.

The old formula used by the PCMs of 20% more power for 10% less cost is increasingly being met by IBM itself, reports Frost and Sullivan.

In the slow growth medium-scale systems market, all true PCMs will gradually lose market share, with the exception of Nixdorf which has established a firm base in Europe, particularly West Germany.

IBM will "gradually claw back" from its low share of the distributed systems market with minicomputers such as the 8100, although its greater success will tend to be restricted to "major systems," concludes Frost and Sullivan.

Jobs saved as Royal Liver dispute is settled

by Caroline Burgess

THE six-week dispute over the introduction of computers at the Royal Liver Friendly Society has been settled and 50 employees dismissed during the action have been reinstated.

Members of the Banking, Insurance and Finance Union voted overwhelmingly last week to accept a slightly improved one-off payment for the extra work involved in a deal which won the reinstatement of the sacked men and insured the full payment of the annual staff bonus.

The dispute started when management refused to make weekly payments but offered an initial payment for the work. Employees at the company's Bristol branch were then dismissed for refusing to work the new system. Action spread to the Cardiff (East), Romford, Sunderland and Liverpool (South) branches.

But, according to a spokesman for the union, once people had been dismissed "support for the action was not strong." The demand for more money took second place to the fight to get jobs back.

The agreement which ended the dispute gives a £1.75 payment for 60 book entries and a £4.75 [illegible] yearly payment for arrears [illegible] in place of the old re-writing fee.

All employees are now back at work.

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Lifeboat suspends UK trading

by Claire Gooding

LIFEBOAT Associates, the world's largest software publisher, has suspended trading in the UK. The company is going through drastic reorganisation in the face of stiff competition from more up-to-date software retail operations.

Lifeboat has always relied on trade advertising and appearances at shows to bring in mail-order business. Its main problems seem to have sprung from the difficulty of delivering on time from its huge software catalogue. Its New York parent puts its own customers first, and Lifeboat UK's demands came low on the list.

The new retail operations also put more emphasis on personal support (Lifeboat gave its support only by telephone), and a presence in the high street, more attractive to business users than the distant relationship of mail order.

"The company has had reasonable success in the UK, but philosophies change," commented Mark Potts, founder of Rair, who has been "caretaker" managing director of Lifeboat's UK operation over the last two years.

He admitted that delivery difficulties had forced Lifeboat to look carefully at its present structure. "Don't forget that Lifeboat became successful through CP/M software, and the market has changed too," he added.

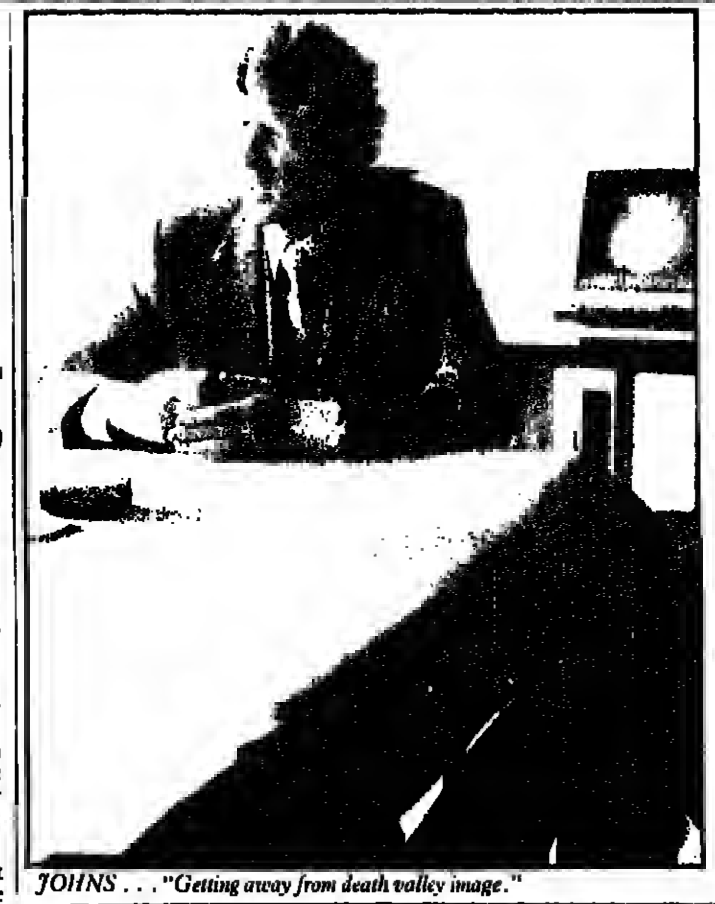
Although present orders are being delivered, Lifeboat confirmed that it was not taking any more orders, and had temporarily suspended trading, more for management reasons than for financial ones.

The UK manager Helen Smith has left the company to become retail products sales manager for Microsoft's UK arm. She will not be replaced immediately.

Potts pointed out that Lifeboat has recently found new venture capital in the US and was unlikely to sink. "It's not the end of the road by any means. We'll see a new style Lifeboat emerge in a couple of months' time," he said.

As the first software publisher to go into volume shipping, Lifeboat had been in a strong position to capitalise on its market lead. But although it provided a degree of support by telephone, the company was not in a position to compete with locally-based publishers. Potts indicated that service and support would play a larger part in the new-style Lifeboat.

CPU profits soar as Octopus floats


JOHNS . . . "Getting away from death valley image."

by Caroline Burgess

PUBLICLY quoted CPU Computers announced last week that it had doubled its turnover and turned in record profits of £1.43 million for the year to June 1983. The announcement coincided with the launch of a new microcomputer range by its subsidiary LSI.

Speaking at the new product launch, LSI's managing director, David Johns, said: "The figures prove we are one of the growing solid companies – getting away from the image of death valley."

It is the tenth successive year CPU has released record figures.

The bottom end of LSI's new range, Octopus, is transportable, but it is designed to expand to a multi-user system with networking capabilities. All are based on a dual 8/16 bit dual processor, selecting one according to the software the user is running.

Johns said: "Standard single user microcomputers are too inflexible to be widely acceptable by a business market with ever-growing demands.

"A lot of machines are being outgrown and then thrown out. Octopus will be developed over the next few years and adds-on will be available in two to three years' time. It is a modular system like Lego," Johns continued.

"It has an 8/16 bit processor because you have got to have both today. The majority of software is still designed for the eight-bit but this is likely to change."

CPU Computers was set up in 1973 and is primarily a distributor of computer peripherals. In 1977, it launched LSI to design and manufacture microcomputer business systems and went public in June, valued at £20 million.

"We manufacture small business systems," said Johns, "not machines to run games that you will find in arcades and kindergarten school rooms."

Octopus is LSI's fifth range of microcomputers, and so far the company has about 6,000 installations of its other machines.

The Octopus range should be in full scale production within three months at about 300-500 machines per month.

Dictaphone bids adieu to wp with price cuts

by John Kavanagh

DICTAPHONE has pulled out of the word processing business after making losses of $20 million in two-and-a-half years.

About 800 US employees will lose their jobs, but the company is selling remaining stock at half price and promises to support customers for eight years.

In the UK, word processing sales were starting to take off but overall the business could not meet the targets demanded by Dictaphone bosses and its parent, Pitney Bowes, according to UK managing director Bill Cottle.

"We won about 3% of the UK market last year and our loss here was declining rapidly," he said. "We had an established user base and we knew what we were doing. But overall the company could not achieve the major market position required. It could not see enough light at the end of the tunnel, especially when the performance of our other products is considered."

Cottle added that other new product areas would be attacked next year. He gave no details but said the product launch depended on approval for connection to the public telephone network.

Dictaphone's main business is dictating systems. Last year its sales were $1,400 million. Word processing sales were $34 million and the loss was $10.6 million. The word processing systems were sold in the US, Canada and the UK.

In the UK, 53 staff were involved with word processing but Cottle said there would be no job losses. There had been a recruitment freeze and the high staff turnover in the office equipment business mean there would be vacancies for everyone.

The half-price offer means systems from the top of the company's Series 6000 range are reduced from £8,500 to £4,300, while the price of standalone systems drops from £5,700 to £2,600.

Cottle said the UK firm had about £1.5 million worth of stock. The write-off will be $50 million.

Dictaphone entered the word processing market in 1981.

Irish set up soft centre

by Tom MacSweeney

THE Irish government is setting up a £1 million software centre in Dublin, aimed at increasing the number of workers in the industry from 2,500 to 7,500 and possibly 10,000 by the end of the decade.

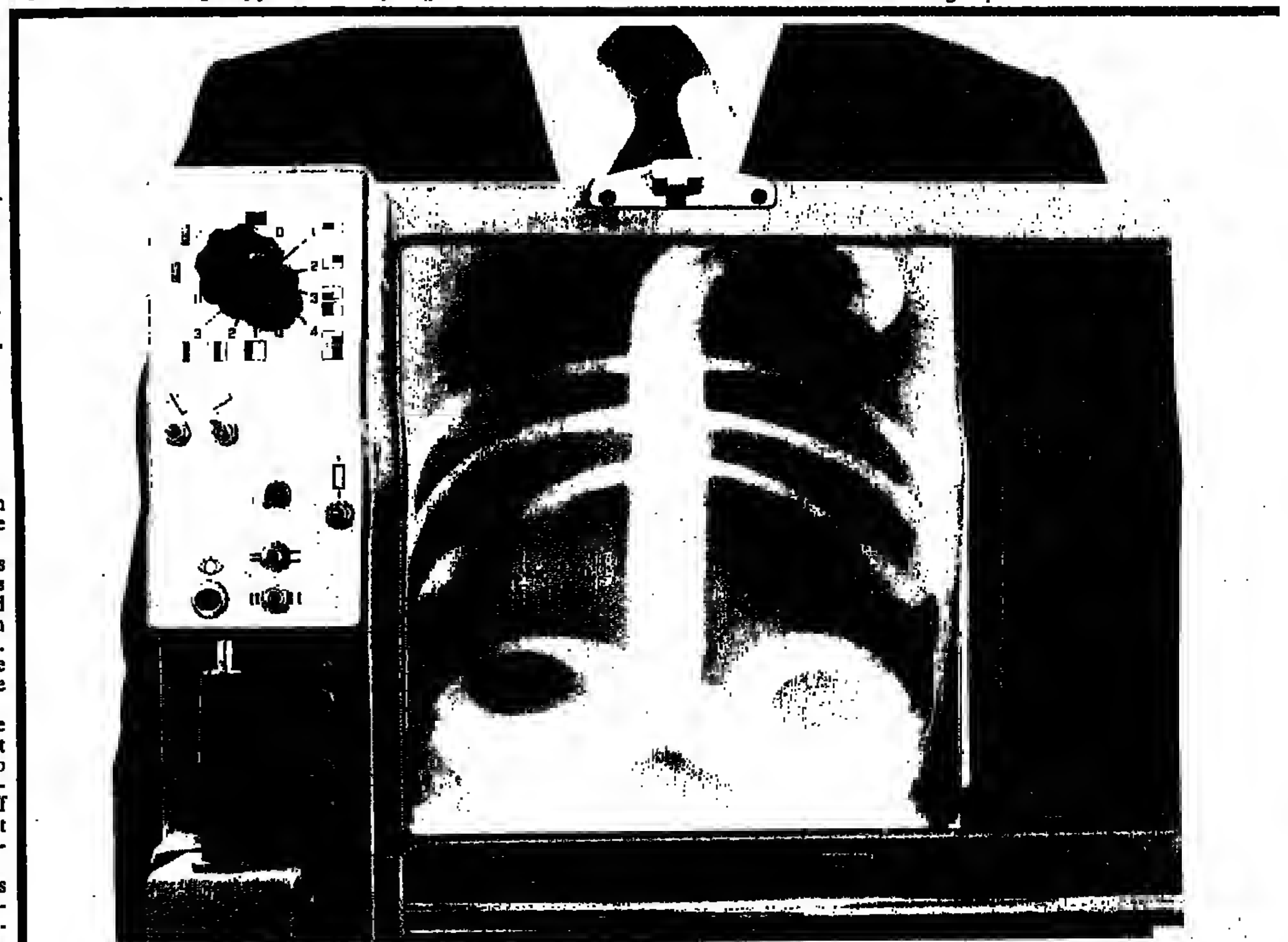
The government says that the new centre will provide a "total infrastructure" for the electronics and computer industry in the Irish Republic.

It is intended to complement the activities of the National Microelectronics Research Centre in Cork and the Microelectronics Applications Centre in Limerick and the Industrial Development Authority will supervise its installation at its new Enterprise Centre in Dublin.

A managing director with widespread experience will be appointed before the end of the year and 14 personnel, with at least three to four years' experience, joining him in the initial start-up.

The idea of the new centre was conceived after international research by the Industrial Development Authority (IDA) to ascertain the strategy Ireland needed for developing a software industry. It is based on similar centres in Europe and its activities will include software development in co-operation with existing software and hardware companies. Software contract work will also be sought for the development of programs for international bodies.

Advanced training techniques at present not available in Ireland will also be provided to increase the technical capabilities of existing companies.



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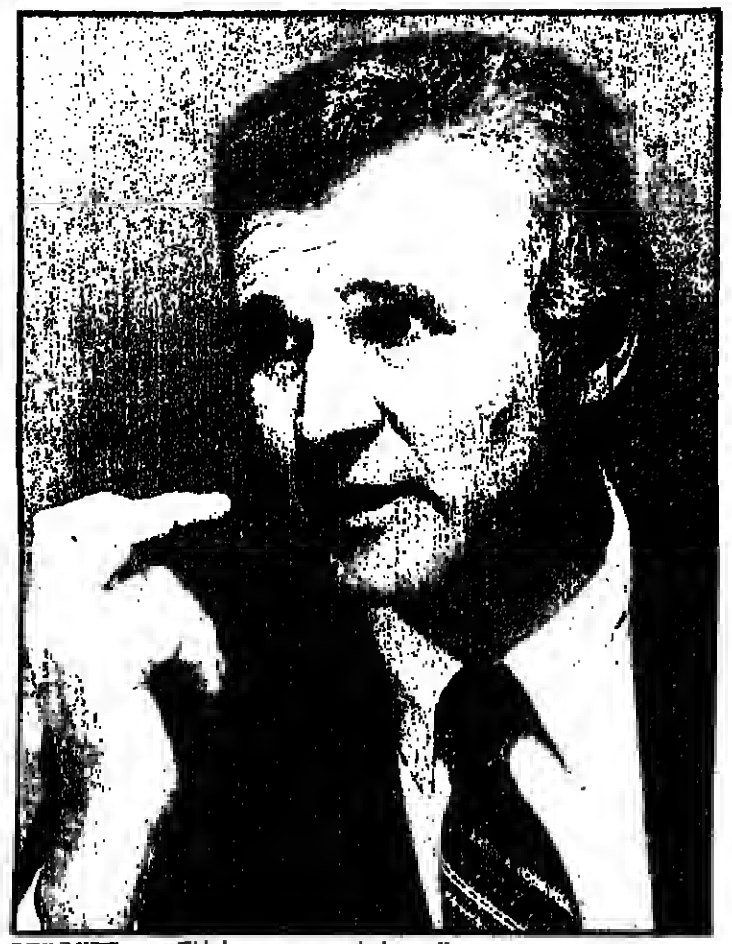
BERRETT . . . *"This is not a mature industry."*

CAD may not last as single market

by Nuala Moran

COMPUTER aided design is on the way out as a single market. The needs of CAD/CAM users are changing, says US CAD giant Computervision, and different market sectors are demanding different products.

"We serve a series of industries," says Computervision president James Berrett, "and used to offer machines with generic capabilities. As a supplier we now see industry-specific requirements developing. This will continue to drive generic standardisation out as there is more specialisation."

CAD/CAM systems must be able to manage design information too, adds Berrett. It is not enough just to have the core capability of creating design and manufacturing information. The ability to control the information will grow in significance.

The core product for the company's integrated CAD/CAM/CAE strategy is the CDS 4000 range introduced last week. There are three models in the range of distributed systems supporting six to 16 graphics terminals.

The graphics operating system of the CDS 4000 is CADD4X, which will support all the functions and packages available on the current range of designer systems. It can also do solid modelling and colour shaded pictures.

The 4000 family is based on a combination of an integrated 32-bit processor with at least one interactive processing unit.

"Our CDS 4000 CAD/CAM systems provide enhanced performance and functionality across a broad range of applications," said Berrett. "It combines proven software with state of the art distributed system architecture."

To meet the requirements of the diverging applications, Computervision is hiring industry specialists to tailor products to meet the particular needs. For example, aerospace now wanted something completely different from the automotive industry, Berrett added. "This is not a mature industry, so we must stay abreast of its needs."

Over 1,000 of Computervision's 5,000 staff are involved in research and development, and the company devotes between 12 and 13% of its turnover to R&D.

The returns are high. "The smallest growth market is still expanding by more than 20% per annum. And we still get a 10% return after tax," said Berrett. Computervision's shares are now worth $52 each, having gone up from $19 this time last year.

The company has given $25 million in CAD/CAM equipment to universities and colleges in the last five years, so that people will come out with the right training.

In the UK, Computervision has very close ties with Warwick University, which has a CAD/CAM course.

SALES BRIEF

Plessey wins £10m deal with bank

PLESSEY has won a £10 million contract to design and provide the Midland Bank with an integrated voice and data communications network. The network will comprise Plessey Controls TP4000 packet switching exchanges and data concentrators, together with a group voice network from Plessey Communication Systems.

Software sells

NEWCASTLE-BASED software house Sage Systems has sold its printing industry estimating and job costing software to VHA Computer Services, the Vickers subsidiary, for £250,000. VHA will market the software with the ACT Sirius micro as a turnkey package. Sage will now concentrate on general purpose and accounting software.

Satellite launch

SOFTWARE house Logica last week launched itself into the satellite telecommunications area with a £500,000 contract to supply Eutelsat with a data management system to co-ordinate satellite networks. The work is expected to take just over two years.

Switching 50

SCICON last week installed its 50th M600 intelligent network switch at Gillette's plant at Isleworth, as part of an order in excess of £20,000, which included the PDS 327 protocol converter. Another three similarly sized orders are in the pipeline, including one with Scottish oil companies.

Cluster grows

THE latest in a cluster of large orders announced by ICL is a £900,000 deal with Sherwood Computer Services of Romford for an additional 2966 mainframe and an ICL Network Processor System to link them. Over the past month ICL has announced orders totalling over £4 million.

Medical contract

IN the wake of its recent £2 million order from the Electrical trades service dealer, Mastercare, for 38 DPS 6 minicomputers, Honeywell last week announced the installation of a DPS/7 computer at the Medical Insurance Agency, culminating in a £115,000 deal.

Educational order

COMART distributor and marketing supplier Jarogate last week won a £200,000 order to supply the Inner London Education Authority with network systems based on its MP/M multi-user micros. It also announced a £100,000 order to supply Comart Communicators and peripherals to the Ministry of Agriculture and Fisheries.

Pulsar signs

ACT Pulsar has signed a deal worth at least £300,000 to port Digital Research's 16-bit programming languages on its new Apricot micro, as well as on the Sirius micro. ACT will now offer CBasic, Pascal/MT+, CIS Cobol, Level II Cobol, PL/I and C.

Spectrums link to French TV sets

by Jack Gee

SINCLAIR Research, which expects to double its revenue in France this year, has signed a major contract for the manufacture of adaptors to enable ZX Spectrum microcomputers to be used with French colour television sets.

Special Peritel adaptors are required, because French TV uses its own national Secam standard. Compagnie Generale de Constructions Telephoniques, a former subsidiary of ITT which was nationalised last year, will make the units at a factory in Longuenesse, Northern France, and deliver them to Sinclair's French distributor, Direco International.

Direco expects the Sinclair contract to be worth FFr 9 million (£720,000) to CGCT during 1984 if sales of ZX Spectrums are on target.

Sinclair currently controls 54% of the French market for microcomputers and has so far sold 132,000 ZX 81s in France.

"But Sinclair is encountering growing competition from Sharp, Tandy, Commodore, Texas Instruments and Thomson," says Eric Bompard, chairman of Direco.

Sinclair sales on the French market have risen from FFr 11 million (£880,000) in 1981 to FFr 45 million (£3.6 million) last year. Turnover of FFr 80 million (£6.4 million) is expected for 1983.

Direco is encouraging the publishing of French language software for the ZXs and reports that its customer information office is receiving an average of 600 calls daily from enquiries.

This figure rises to peaks of 2,000 at Christmas and during Paris's Sicob computer technology exhibition.

Business is developing so fast that the French representative has opened display centres in Paris, Lyons, and Marseilles to enable users and potential buyers to see the Sinclair models in operation. Within the medium term, 10 of these so-called pilot points are planned.

Bompart says: "We are beefing up our operations because of the encouraging outlook for the French microcomputer market. We believe it is now only one year behind Britain and will capture Britain's first place in Europe towards 1985."

Confirming Bompard's forecast, Charles Cotton, overseas business manager of Sinclair Research, says: "It is clear that the European markets, headed by France and followed by West Germany, are now feeling the microcomputer phenomenon. They are catching us up fast. In 1982 France was our third ranking market for volume."

Cotton said Sinclair hoped to help in the development of educational microcomputing in France: "There's an enormous potential."

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Vector is ready for expansion

by George Black

VECTOR International, which made its name as distributor of Digital Research and Microsoft operating systems, is preparing for a big expansion of its operations. This is expected to lead to growth in its new Kingston-based team to about 23 people by early next year and to the opening of a new office on the West Coast of the US.

Director Jim Porzak is currently in California to make arrangements for the office, so that the company can be close to one of its major product suppliers, Chang Labs.

In the last year Vector has achieved over £500,000 sales of micro software in the UK, largely written by Chang, Microcal, Digital and Micro Focus. To head the newly established UK subsidiary, which has moved from Tunbridge Wells to Kingston, Vector has recruited former PPL general manager Stewart O'Malley to be its managing director.

O'MALLEY . . . *"It is much more friendly."*

Vector's head office is in Brussels.

One of the aims of the expansion programme is to launch the Everyman micro database system developed by another Kingston firm, Smallway. Although Everyman has so far only a few users, such as the Royal Opera House, O'Malley says it could become bigger than even Ashton-Tate's successful dBase-II.

"It is much more friendly than dBase-II," he claimed.

Alpha Micro profits hit record note

by Caroline Burgess

US MICRO manufacturer Alpha Micro turned in record profits of $1.65 million for the six months to August – over 200% up on the same period last year. Turnover nearly doubled to $23.3 million.

"The increase in sales and earnings for the first half of the year reflects the growing market acceptance of our MC-68000 family of business computer systems," said Alpha Micro's president, Richard Cortese.

The UK contribution was put at about 10% by general sales manager, David Ford. "We have a relatively small market share, but we are building on a very strong foundation. It is a steady growth.

"UK sales are up in line with the corporation's. We are reflecting their performance, which has been aided in the last year by a more marketing oriented strategy."

Alpha Micro now has over 1,000 systems installed in the UK. "We are in the mid-range micro market," said Ford.

Study examines dentists' pay

by Caroline Burgess

THE government is to spend £1.9 million looking into the possibility of computerising DHSS payments to dentists in a pilot study involving 60 practices.

A steering group, formed of representatives of the British Dental Association, the Dental Estimates Board, and the government, will look at ways to change the complex system before inviting tenders for the software development.

Sixty practices will then be used to take part in the study, each having to pay 50% of the cost of installing its micro. The study, planned to run for two to three years, will be evaluated in its final year.

"The DHSS payment scheme does not lend itself to simple computerisation," said a spokesman for the British Dental Association, "as the forms are a legal contract between the dentists, the DHSS and the patient.

"But most of the dentists' work is for the DHSS and it is a very big clerical job. The benefits to be gained are more than straight economics. It will make the dentist's job less stressful."

The pilot scheme was recommended by a report commissioned by the British Dental Association in 1981 into the use of microcomputers in general practice which was published at the end of 1982.

No dates for the installation of the microcomputers have been set. But the selection of the practices to participate will begin immediately.

"As the cost of computers has come down, it has opened up a lot of potential uses for them," said the spokesman. "But the basic job of the pilot study is to sort out the payment system. We can then build from there.

"We hope to go ahead with the study very quickly."

The scheme is very similar to a £2.5 million government project to introduce 150 microcomputers into doctors' surgeries announced in June 1982. Over 100 micros have since been installed and the remainder are expected to be in place by early 1984.

Money to finance the study comes from the Department of Trade and Industry's information technology fund. The Dental Estimates Board currently deals with about 33 million claims per year.

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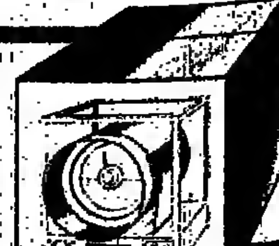

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Baric gets £1.23 million for print arm

by John Kavanagh

PAYROLL bureau Baric Computing Services has sold its Systemset typesetting and printing operation to computer-output microfilm firm Microgen. The £1.23 million deal is Microgen's first takeover since it went to the Stock Exchange in January to raise cash for expansion through acquisition.

"We're all delighted," said one of the Systemset staff. "Baric doesn't see us as part of its mainstream business and now we're joining a company in a relevant market."

All Systemset staff are being kept on at the operation's offices in Letchworth, Hertfordshire.

Systemset has a turnover of over £1 million and a profit of £275,000 from typesetting and laser printing, including contracts from ICL to produce manuals and other documents. Baric is jointly owned by ICL and Barclays Bank.

Microgen is growing at 30% a year. Last year it made a £590,000 profit on business worth £2.75 million. It has processing centres in seven cities in England and over 800 customers.

Tesco boss hits out at EEC

by John Riley

TESCO's computer boss hit out last week at the European Community and national governments for ignoring the social implications of new technology. He called for a European IT awareness programme.

Speaking to the European Parliamentary all-party group on retailing, Donald Harris, Tesco's director of computing and distribution services, attacked the political institutions for keeping their heads in the sand about the potential social consequences of computerisation.

"There is no indication that either the Community or its member states have recognised the need to devote as much attention to the social problems implicit within the introduction of new technology as they have paid to promoting the technology itself," he told a group of Euro-MPs and Eurocrats.

Harris, who is chairman of the technical working party of the retail consortium, warned them of the imminent problems from electronic point of sale systems and electronic funds transfer systems which are on the brink of widespread acceptance.

He pointed out that 80% of goods in British stores are now bar-coded, and although the number of stores with bar code scanning systems is still small – 42 in the UK – he forecast that the market "will be nearing saturation point at the start of the next decade.

"Information is now the name of the retail game," he said. "It is essential if we are to maintain the balance between the macro-economics of supply from world markets and the micro-economics of demand at the checkout counters of Europe every day."

Harris drew attention to experimental EFTS systems in Europe and the London Clearing Banks proposals for trials in the UK, and also to home shopping by computer experiments conducted in Gateshead by Tesco.

Harris went on: "The in-store investment in advanced systems will embrace a growing number of functions paralleled by the development of cable-based home shopping.

"Home shopping for a measurable element of the population could be a fact by 2000 AD."

Harris is encouraged that the European Parliament and Commission are beginning to become aware of the potential social problems.

These include unemployment, especially among women, shorter working hours and increased leisure and holiday time.

"The parliamentary group were interested enough to ask me to speak to them.

"I am hopeful that a co-ordinated programme might emerge in the future," he said.

HARRIS . . . *"EEC has ignored social implications of new technology."*

W. H. Smith lists top 20 journals

by George Black

THE UK's biggest computer magazine shop, W. H. Smith, has confirmed that it has drawn up a list of 20 micro magazines for display on its shelves.

Twenty is far less than many Smith's branches are currently showing, but in order to allay publishers' fears of a wholesale purge, Smith is stressing that the list is not an official top 20 but only a guideline for shop managers.

"We are not saying that there are any magazines that branch managers can't handle," said a spokesman. "If there was an obscure magazine that a customer wanted they could order it, if it was one our buyers had approved."

Smith insists that computer magazines are not being treated differently to any other category of publication. The number to choose from is rapidly escalating, shelf-space remains constant and the headquarters buying team is not going to approve a lot of magazines that cannot be displayed.

So branch managers may be left to make their own decisions, but the headquarters' policy will prove a crucial factor. The well-established *Your Computer*, *Practical Computing* and *Personal Computer World* should turn out to be safe bets, but the dozens of newer hopefuls could soon fall by the wayside.

Smith's buyer George Moore said that Smith had 53 approved micro titles. It had been offered 24 new ones since July – only four had been rejected, mainly because they did not deal with machines used in Britain.

Computer magazines account for 6% of the news shelf space. Circulations are hard to estimate, he said, but might range from 15,000 to 100,000. These included considerable local variations which made it impossible to dictate display rules.

French asked to forgo data laws for Amnesty

by Jack Gee

SENATOR Jacques Thyraud, president of France's national watchdog Commission for Computer Technology and Civil Rights (CCTCR) has appealed to the French government to waive its rigorous rules on the contents of databanks in order not to handicap the work of Amnesty International.

Amnesty International, which won the 1977 Nobel Peace Prize for its efforts on behalf of political prisoners throughout the world, operates a databank from its London headquarters containing detailed information about their careers in politics and their prison records which would be outlawed in any French databank.

France's 1977 law, which set up CCTCR, carefully safeguards its own citizens against the incorporation of this type of information in computer files.

But Senator Thyraud said: "In the case of Amnesty International we must now allow legal formalism to defeat the work of this worthy organisation. This is an example where the French restrictions should be relaxed. The same argument applies to the Red Cross and to Medecins Sans Frontieres."

Medecins Sans Frontieres is an organisation which sends volunteer medical teams to areas such as Afghanistan and Kurdistan to tend the sick and wounded in the world's battle zones.

The computer files of Amnesty International, the Red Cross and Medecins Sans Frontieres contain detailed information about their own active supporters and, in the case of the latter two bodies, their medical qualifications.

France's law on computer technology and civil rights bans information on file about health histories. A file on handicapped French children was scrapped two years ago following a ruling by Senator Thyraud's commission that the file could hinder them in their schooling and professional careers.

French law guarantees every citizen access to databanks except those of the police and defence ministry he can, for example, demand to know whether his name appears on a mail order firm's list of customers, and can have it removed if he disapproves of the entry.

It is also illegal in France to identify a citizen in a database by his religion or political affiliations.

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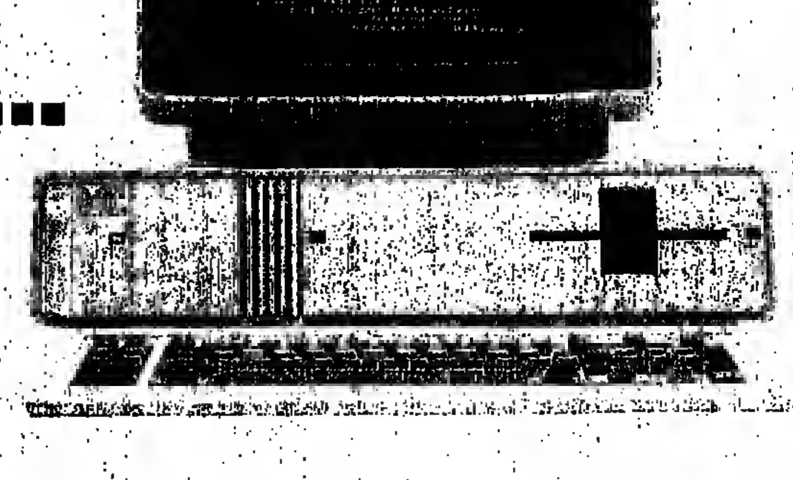

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Workstation brings cash to Sussex

by Nuala Moran

UNIVERSITY of Sussex computing centre has sold over 250 Workstations, a ROM-based terminal emulator designed for the BBC Model B. Three workers at the centre, Ken Blanshard, Brian Williams and Simon Barnes, developed the system in response to government calls to universities to generate their own revenue.

Workstation allows screen editing on DEC computers, and executes Tektronix 4010 Alpha and graphic control codes. The ROM will fit into BBC model Bs with version 1.0 or 1.2 operating systems. According to Blanshard: "Workstation is aimed at people who want terminals at minimum cost. It performs as well as Datatype for half the cost."

It is just over a year since the three started working on the project. Blanshard said they got it working in January, and began selling it to other universities in March and April.

"We had a letter about Workstation printed in the South-west Universities Regional Computing Centre's newsletter which generated sales from them, although I wouldn't say we have advertised Workstation as such," said Blanshard.

"At the moment we are talking to a private software house about selling to industrial and commercial users."

The EPROMs are produced at the computing centre itself. "We program batches of between 50 to 100 at a time, then burn them in and copy off all the documentation," said Blaoshard.

The three meo fit in production and sale of Workstation around their normal work, though the university accounts department is handling things like billing.

Profits from this venture go back into the computing centres' account to buy equipment and enhance its service. Blanshard explained that the university takes a share as well.

Workstation is the first product from the computing centre. "It's the first decent commercial thing done here," said Blanshard. "The centre will be considering further projects and it looks as if the success of this venture will encourage people in other universities to get commercial."

BLSDEN . . . "Agreement marked death knell af 16-bit mini market."

ABS quits minis to be OEM

by Jobo Riley

BRITISH micro and minicomputer manufacturer ABS Computers is to stop making minicomputers within 18 mootha and will become an OEM instead, according to managing director John Elsden.

The occasioo was the launch uf ABS' oew 32-bit supermini range, called CHorse, based on Perkin-Elmer 3200 Series processors, the result of the recent £3.5 million OEM deal with the US company.

The CHorse, so-called because of ABS' oew commitment to the Unix operating systems and to the C programming language, is part of Elsden's solutioo to the problem faced by 16-bit minicomputer manufacturers.

Squeezed at one end by multi-user micros and at the other by 32-bit minis, he haa decided to maoufacture the former — he launched hia Orb multi user micro in June — and to be ao OEM for the latter.

"As far as we're concerned the Perkin-Elmer agreement marked the death knell of the 16-bit minicomputer market," said Elsden.

Paradoxically, becausc the CHorse permits easy migration from the MX Series, "interest in the MX has increased because the CHorse represents an escape route for users", explained ABS' sales director John Parnell.

The CHorse Series comprises three machines, the 321 which supports 16-32 usera, and runs at 0.5 mips with a typical starting configuration price of £100,000; the 323 (32-64 usera, 0.75 mips at £150,000); and the 325 (64-128 usera, 1.2 mips at £200,000).

ABS is Perkin-Elmer's first product OEM for the enmmercial market and represents Perkin-Elmer's first major push into the general commercial market.

Perkin-Elmer has sold mainly the technical market.

"We have an important cnntribution to make to the commen market as our systems are p duced to military standards," s Brian Hanley, Perkin-Elmer g eral manager, "and that is imp tant for customers who are sen cooscious."

The MX Series of 16-bit m caters for up to 16 users and CHorse for over 16. That leav gap between the Orb and CHorse in ABS' future pod lioe which is likely to be plug next spring.

Elsden inteods to have transportability between the and CHorse.

"One example of our syst reliability is that they are regul shipped backwards and forw in trucks in Australia to some off-track betting totalisers fun commented Bill Fish, Perk Elmer business systems mana "They have to be rugged to that."

Perkin-Elmer has no plans develup applications software its machines, and Hanley sai expects that the increase in number of new users would m than compensate for fall hardware prices over the next years.

Although aware that comment to Unix could result in users switching to other manufacturers' equipment, Elsden is confident that he can keep them happy.

"Another important point choosing Unix is the flexibility the hardware," he said. "Also we have excellent relations w Perkin-Elmer now; we protected if they decide to s elsewhere."

Small software house signs with NCR, Nors

by John Riley

NCR and Norak Data both announced joint marketiog agreements last week with the year-old software bouse Turnkey CAE to use its computer-aided engineeriog programs on their machines.

The deals mark a coming-of-age for Bristol-based Turnkey CAE, and according to managing director David Ross-Turner Hume, they vindicate the governmeot small firms loan guarantee scbeme which gave his company backing doring last year.

"British engineering software is the best in the world aod we decided to get of our backsides and do something about it," said Ross-Turner Hume, who was formerly managing director of Matra Datavision.

"I approached the local bank manager in a small Somerset town and he backed me all the way and put me in touch with the loans scheme."

Turnkey CAE which has a staff of eight, specialises in modular low-cost computer-aided engineering systems written in Basic and Ansi standard Fortran for a Sirius microcomputer, which are designed to interface with giant systems.

Turnkey's programs, which will run on NCR's Decision Mate V 16-bit microcomputers, will form the basis of NCR's fully integrated manufacturing ayatem to control design, raw material availability and manufacture.

Norwegiao minicomputer manufaeturer Norsk Data has Turnkey's software on its range 16-bit and 32-bit machines.

"We were looking for a way getting data from computer-aided engineering systems into company's administrative process aystems and Turkey's software Ideal," said Gary Lake, of Norsk CAE Group.

Turnkey is also set to benefit Norsk Data small systems distr

"There are a lot of people in Britain with good ideas," said Ross-Turner Hume, "and there are only two differences between California and us — one is the sunshine; the other is venture capital. "It takes a lot of guts to put your own house on the line, which is what I've done."

"Our staff comprise engineers as well as computer people, and our technique has been to go to companies and ask them what they want. We've worked closely with them, and then we brainstorm on top of the original requests," he added.

Correction

IN last week's terminals feature the suggestion was made that Ferranti had not made a significant impression on the ICL-dominated market. In fact, Ferranti says it has shipped £19 million worth of its PT7 terminals to ICL customers since 1980.

Apologies for our oversight.

Cell radio makes data mobile

by Donald Kennett

CELLULAR radio services, due to start in the UK in 1985, will provide new opportunities for mobile data communications.

Speaking at Oyez IBC's conference on tbe Applications of Cellular Radio in Londoo, Malcolm Ross, of consultancy Arthur D. Little, said that because capacity on existing mobile telephone services was so limited, the telecommunications authorities usually allowed only simple telephony to operate on them.

But many users would like to communicate datn to mobile units, he said.

Since cellular technology was capable of satisfying all foreseable business damand, there was an obvious opportunity to provide data services, including facsimile and text transmission. Sueh services were being studied for systems in the US and Japan, and further into tbe future a digital transmission path would allow voice calls to be encrypted as a security measure.

The start-up costs were considerably greater for cellular systems than for conventional systems, Ross said, but the cost per subscriber fell as the system grew. A conventional system for 200 subscribers would cost $1,250 per subscriber, while a cellular system would serve a minimum of 600 subscribers at a cost of $2,000 each. When the cellular system grew to an intermediate size, it would cost only $715 each to serve 3,500 subscribers.

Th high start-up costs meant that any delay in the regnlatory process could be crippling to companies because of the cost of the interest on the capital tied up.

But Ross said his organisation predicted a faster growth rate than did any of the operating companies, including AT&T in the US. While AT&T predicted a $1.5 billion a year US market from a subscriber base of 1.5 million by the late 1990s, Ross said it would happen by 1990.

It would be about $600 million a year by the mid-1980s, he added.

The history of mobile services had been characterised by waiting lists, he said, and whenever the capacity of a syatem had been expanded, the extra had been taken up much quicker than the supplier expected. Even when the West German Bundespost had increased its tariffs six-fold in 1970, the subscriber base had shrunk only marginally, and two years later the rapid growth had been resumed.

European PTTs were trying to protect their indigenous suppliers by developing European standards at a time when technology made them irrelevant. US and Japanese manufacturers could adapt their systems to European standards just by changing a few compooents. And the time taken to agree on European atandards was delaying the market.

US and Japanese manufacturers were looking at market projections that went beyond the scope of the European view, he said. They placed far greater emphasis oo hand portable telephones and pocket data terminals. They could see that this would answer the problem that 75% of calls failed because the called party was neither in his office nor his car.

They could see that they would be able to make a portable telephone for $350 by 1987, because the most sophisticated part of it was less complex than a $15 pocket calculator. Japaeaee companies had a coherent plan for a hierarchy of products from a pocket voice and data terminal to a wrist watch radio.

Arthur D. Little had concluded that there was a market for pocket telephones that would grow as fast as video recorders, Ross said. "We've got to get out there as fast as we can," he added.

DIERY . . . "We want ICL and DEC to offer Wang WP compatibility."

Wang gives the compatible word

by John Riley

WANG is to publish information about its proprietary word processing standards as a lever into a wider market for its low end systems.

That was nne uf several announcements by Wang UK last week, which included the UK launch of its new low end 32-bit VS85 minicomputer, Professional Computer enhancements, new entry-level Office Information System products, and cuts in peripheral prices.

"We want to get companies like ICL and DEC to offer Wang word processing compatibility," explained Ian Dicry, Wang UK managing directur. "We are leaders in word processing technology, and if they offer compatibility it will help to stem losses in their mainframe sales. Both sides stand to gain."

The long-awaited top end 32-bit minicomputer, the VS200, did not figure in last week's announcements. "We expect to enlarge the VS 32-bit range both up and down," said Dicry, refusing to be drawn.

The new low end 32-bit VS85 machine offers up to four Mbytes of main memory, 2.6 to 5.1 Gbytes nnline storage, 32 Kbytes cache memory, and can support up to 32 users (48 with cache memory) and up to 64 peripherals.

A basic configuration, including a 288 Mbyte disc drive, costs £55,130.

Immediate price cuts for peripherals include 16-48% cuts in disc drives, 17% cnts for Wang's 35 cps Daisy printer and 8% cnts in the price of its DI² Serial Station.

Professinnol Cnmputer enhancements include a Local Interconnect Option which allows up to 24 PCs to be clustered, and four clusters to be interconnected, a UCSD P-Runtime support system for Pascal language users, Wang word processing interchangeability with Wang's OIS and VS systems.

Other enhancements include 3270 bisynchronous and 3276 SNA/SDLC communications for IBM machines, and a Digital Equipment VT100 emulator.

Future products from Wang will, according to national marketing support manager Richard Levy, be based on networking products, data processing and word processing products and office technology.

The new Professional Imaging Cnmputer, which can digitise and manipulate a complex image, will be available early next year, with a new thermal printer. The PC will also have a new high resolution screen with twice the linearity early next year.

Other developments will be a fourth generation software system, based on a relational database management system, and enhancements to its local area network.

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CONTROL DATA

SOFTWARE FILE

BGS arrives to prepare for disaster

by Claire Gooding

DATA processing disasters can be avoided if planners pay more attention to long-term needs, according to one of the best-known US firms in the capacity planning field, BGS Systems. The company has arrived to preach this message in the UK.

BGS is best known for its Best/1, Capture/MVS and Crystal performance products, and has several UK users for its software already, including British Telecom, Harmondsworth. Now the firm is taking advantage of the increased interest in the UK to set up its own office and support division in London.

"We estimate that the market size here is about 10% to 15% of the US," said vice president Robert Goldberg. "The major problem is to convince users of the need for planning: it's not just something to be jotted down on the back of an envelope.

"One of our main concerns is that technology has been oversold. Senior DP people should implement better planning and control techniques to stay on top, or the whole industry will suffer."

According to Goldberg, British users tend to be more sophisticated, and less given to overbuying hardware, because of stricter cost constraints.

The company has 20 UK users of its Crystal products and has been doing most of its support via long-distance telephone calls and flying visits. Vernon Northover, a long-standing member of BGS in the US, is to head the UK operation.

"There will be an increased demand for our product line in the UK, partly because people have no way of predicting future needs and the impact of new products. We've seen the signs already," said Northover.

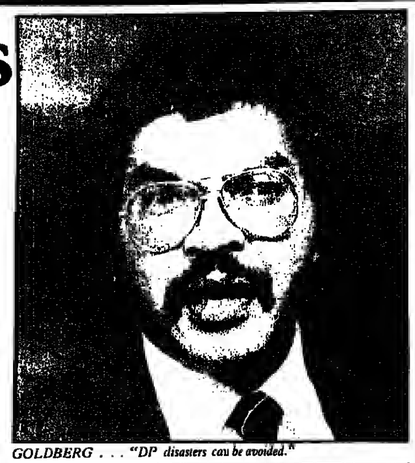
Among the factors in capacity overload which are likely to affect UK end-users are enquiry tools and the arrival of the networked personal computer as the rogue cards.

BGS is about to introduce a new product aimed specifically at the network market. "An increasing amount of the DP budget goes on networking," said Goldberg, "but users complain about degraded performance. With Best/1 SNA we have integrated the software to work with baud lines, various controllers and other network factors so that it can figure out exactly what the delays are going to be."

The product uses proprietary mathematical formulae which BGS treats as a major trade secret. "It will make us a major force in the SNA market," commented Goldberg.

BGS is also adding to its range of products with a VM version of the Capture workload monitor, and a database, Info/Base, which builds up historical data on capacity management and uses the SAS Institute's graphics package to report on system variables.

The long-term intention is to build up knowledge of the various IBM operating systems.



GOLDBERG . . . "DP disasters can be avoided."

Plessey puts its weight behind Unix

by Claire Gooding

PLESSEY is to throw its weight behind the Unix movement. Its business division, Plessey Microsystems, is swelling the ranks of those offering to business users multi-user systems based around Motorola's 68000 chip.

Plessey's System 68 is using two licenced versions of Unix, both from European outlets. Microsoft's Xenix, supported in the UK by Logica, and Unisoft's Uniplus+ (both based around Unix System III), have been chosen partly because of the strength of their European support. Logica and Unisoft's distributor, Root Computers will deal directly with Plessey, although the customers themselves will see only Plessey's face.

"We've gone further than most in that we've taken two implementations," said commercial director Ian Chapple. "The advantage of this is that the two versions gather different sets of applications software. It is useful for large users to get the operating system from a variety of sources. It means they can configure it according to their requirements."

Chapple says that Plessey is in the business of selling large quantities to "DP people, not the sort of buyer who wants hands held forever," and will be pushing its Unix systems into specialised areas such as military programming, and CAD/CAM systems.

In the face of market reluctance to buy Unix-based systems, Plessey is sticking to CP/M and its derivatives for its single-user System 19. But Chapple is confident that Unix business will pick up as the applications become more freely available.

"It's true that buyers are unwilling to buy from the smaller manufacturers in case they're not around for long. But they don't have to worry about that with Plessey, and we can afford to wait a while.

"Unix is bound to dominate the market: people bred with the system at university are now getting into positions of influence in the industry."

CHAPPLE . . . "We've gone further than most."

Plessey has stuck to the standard path to increase its chances of OEM business. It has concentrated on providing performance and speed — a constant gripe about many Unix implementations — and a certain amount of flexibility, so that OEMs can suit themselves. Part of its strategy is to offer the Multibus IEEE 796 standard interface as a route to other manufacturers' kit.

"We see Unix as being the programmer's main tool for many years to come," said Chapple. "It will be accepted worldwide, and have a much longer life than most operating systems."

Microsoft lures Japanese to UK

by Claire Gooding

THE first tangible results of Microsoft's efforts to woo Japanese microcomputer manufacturers have arrived in the UK. The Spectravideo SV328, the first machine to use the MSX eight-bit operating system proposed by Microsoft, went on show at the Computer Trade Forum in Birmingham earlier this month.

The SV328's quiet arrival in the UK coincides with the announcement by Nippon Gakki that its home computer based on the MSX standard will go on sale in Japan in November.

The signs are that after a lukewarm start, the Japanese are taking MSX very seriously as a unified standard for eight-bit micros. The MSX-DOS operating system was drawn up by Microsoft with 14 Japanese companies and the US manufacturer Spectravideo, whose machines are made in Hong Kong.

It was devised to give the manufacturers a common basis for disc access and file management which would work with any size or type of diskette. The MSX-DOS system also makes it possible to read files created by the Microsoft 16-bit operating system MS-DOS, and is compatible with Digital Research's CP/M-80, already a standard among the older eight-bit machines.

Enormous interest in the Spectravideo kit is reported by CK Supplies of Weston-Super-Mare, which has won the exclusive distributorship for the machine.

"It will soon be appearing on the shelves of UK chains and retailers," said CK Supplies managing director, John Bellinger Smith. "We have already signed deals and are setting up a dealer network.

"There's enormous interest, partly because of MSX, though that will be more important in a year or so when other machines using it are on the market. There was an obvious need for a standard like this and the Japanese have taken a lead in it."

In the US the machine is being tipped to take over the slot at present occupied by Sinclair's Spectrum. Users in the UK are already enthusiastic about the system's graphics capability and the MSX Basic implementation.

The MSX manufacturers are in a good position to take advantage of the personal computing boom brought about by the IBM Personal Computer. Users will be able to transfer discs and data between office machine (probably IBM PC) and the cheaper MSX home computers.

The MSX manufacturers include such names as Canon, Fujitsu, Hitachi, JVC, Pioneer and Sanyo among the 14 companies, and other manufacturers including Atari and Dragon are also rumoured to be looking at the MSX standard.

Microsoft rival Digital Research is also concentrating on graphics and has replied to MSX with its own portable graphics standard, GSX, for MS-DOS, PC-DOS and CP/M.

Micro Focus moves to an electronic office

THE new Micro Focus headquarters in Newbury is to be a showcase for IBM office technology. Every Micro Focus employee will have a PC on the desk, and all will be linked via coaxial cable in a sophisticated office system using electronic mail software.

Also going into the new premises is an IBM 4341 mainframe, and other hardware including a Unix-based Systime 6000, and Xerox's advanced Star workstation.

The number of IBM PCs is expected to rise to 150 by the middle of 1984 as Micro Focus concludes its push to double its programming staff.

Micro Focus' massive expansion is a direct result of its recent listing on the Unlisted Securities Market in spring this year. The company's shares have risen from the original price of £1.55 to £6.40, despite its warning that there would be no dividends because all profits would be ploughed back into the expansion programme.

The PS users will be using Micro Focus products, including its Personal Cobol, to develop programming tools across various hardware and operating systems.

The variety and size of the new programming outfit indicates that Micro Focus may well find itself in the applications market, with particular emphasis on linking micros to mainframes now that the PC is becoming a vital part of office strategy.

Motorola adopts productivity package

MAESTRO productivity software has been adopted by Four Phase Systems, Motorola's Information Systems Group. The system, developed by German software house Softlab, is already in use on the Philips 3500 office system and has over 450 users worldwide.

Maestro will now be sold by Four Phase Systems as part of its office automation strategy. While it is not cheap — a 24-workstation system from Four-Phase plus Maestro licence costs $19,000 — Maestro is one of the most comprehensive general purpose productivity aids available, claims the company.

It is also said to be faster than many code and applications generators, and particular attention has been paid to ease of use, with such features as function keys for reserved words, cutting down many of the error-prone stages of programming.

Comserv offers training

MANUFACTURING giant Comserv is going into training with a set of courses which it claims will be run totally independently from its software product, the Manufacturing Series.

The course will be based on research done by Comserv in planning and manufacturing requirements.

The course is to be marketed worldwide by Comserv and its partner in the enterprise, Advanced Systems Inc, which is a specialist in computer-based training.

This follows the increasing trend for computer companies to set up independent training courses, on the principle that consumer education is an important part of getting products recognised.

Software File is compiled by George Black

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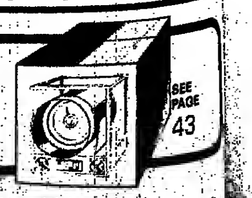

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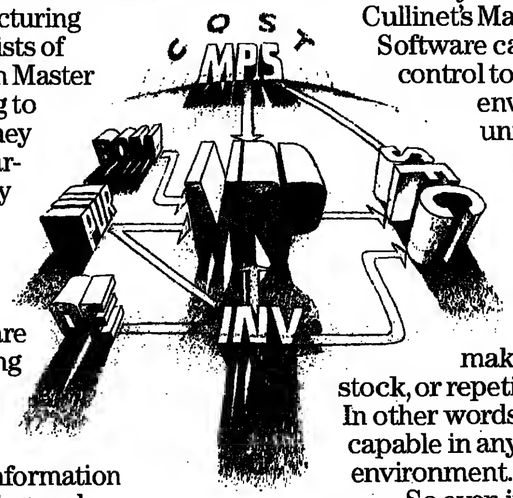

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MICRO NEWS

Co-operation is the key for personal computer makers

Keith Holder was at the *Financial Times* professional computer conference last week and saw that US personal computer strategy (personified by IBM) is way ahead of Europe

HORSNELL . . . "The Esprit programme is not enough."

DISUNITY, national interests and stubborness of governments could dilute Europe's influence on a future personal computing strategy, Dr Dick Horsnell, director of Philips Business Systems, has warned.

Speaking at the *Financial Times* professional personal computer conference last week, Horsnell said that competition and strategies for personal computing were shaping up in the US and Japon while European governments were worrying about deloying o £200 million subsidy to sheep farmers (part of the £900 million Common Agricultural Policy), and spending a paltry £100 million on computer technology in the form of the Esprit programme.

The face of personal computing is changing, Horsnell soid. It has come a long way from its humble origins with hobbyists. Now there are four millioo personal computers used worldwide, and management staff are catching on. In the US 24% of managera use them, in Japan around 10%, but in Europe only 3%, Horsnell said.

Horsnell pointed to four areas which need careful nurturing if Europe is to develop a common policy. Infrastructure facilities, where the international telecommunications networks would serve as a useful model; education; research and development; and software.

He placed particular emphasis on the need to educate. "In the psst, techoology has moved so fast that it has been impossible for authorities to keep pace, but the time is now approaching when this must be rectified."

The key to success lies in co-operation, not only between governments but also between individual companies, Horsnell said. "Even Philips makes no secret that cooperation is necessary; we can't be active io every field of rescorch."

He doubted that the Esprit programme was enough, and pointed

Europe is spending a paltry £100 million on technology in the Esprit programme

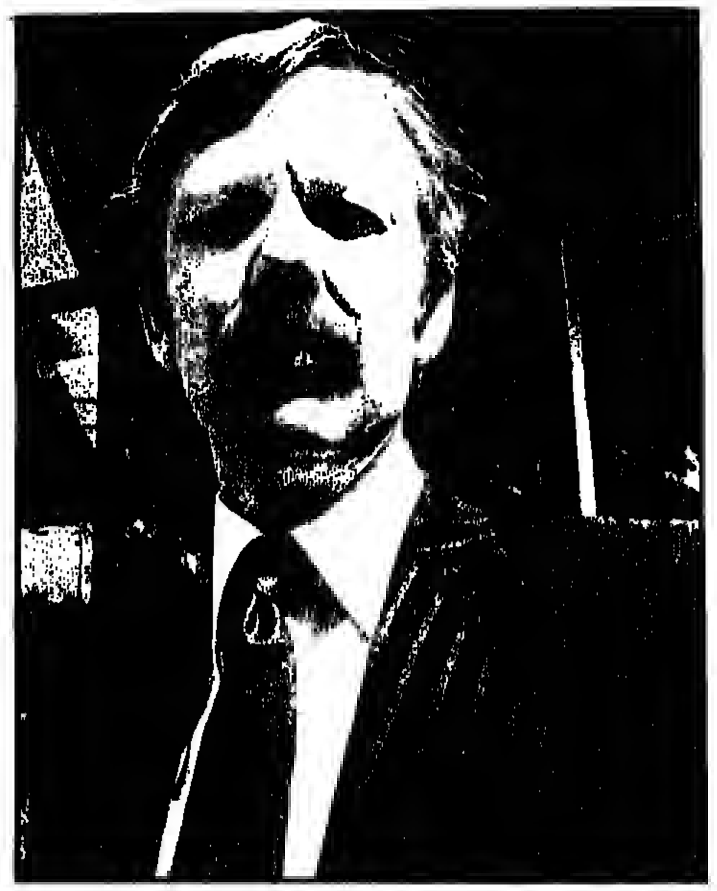
to the more healthy university/industry cooperatives which seem to flourish in the US.

The main challenge from the US will come from IBM, according to Alex McIntosh, director, entry-systems operations, for IBM (UK).

McIntosh described how the company pared to the bone development time in order to get the IBM Personal Computer out in just 12 months. "This is a completely new cycle of investment and return," he said.

Msoy of the other speakers paid homage to the success of IBM's marketing strategy, and the effect it will have on how the market is perceived.

David Crockett, president of Dataquest, said: "IBM's entry into the professional personal computer market represents a move away from confusion to safety for users." He added thay the potential sales for these machines would shortly dwarf all other sections of the computer market.



ANDROLIA . . . "Smaller manufacturers put pressure ou the leaders."

Dataqueat's own market analysis showa thot by 1987 annual world sales will be $51.9 million.

A spokesman for DEC said that he saw no reason why IBM should not attain its goal of a 60% market share if the preacnt trend continues.

The market will have changed completely in the next five years, said conference chairman Rolf Leister, himself a former IBM director.

He warned that simply having a good product was not enough to guarantee successa, and to have any chance a manufacturer must gain distribution channels quickly.

This thought was echoed by Brian Androlia of ACT, who described the evolution of the Apricot. He outlined several factors which were important if a company is to succeed in the market. They include software compatibility, attractive design, product identity and distribution.

Although the market was set to be dominated by two or three giants, Androlia thought that the emergence of products from smaller manufacturers would serve to put pressure on the leadcra.

Software should run on all machines, said Jacqueline Morby from TA Associates, a venture capital company. She said the home software market will grow at a rate of 44% between now and 1988 to reach $5 billion, while the office software environment will reach $6.7 billion over the same period, she told delegates.

Morby described the microcomputer market as one offering returns to investors unequalled in investment history, and said the opportunities existed particularly in the dotobase area.

Despite clever strategies for the smaller companies, the dominance of IBM was a more or less constant theme throughout the two day meetiog.

Jean Yates, presideot of Yates Ventures, which offers consultancy services for the micro market, summed up the general opinion when she said: "Before IBM entered the market place, personal

There are now four million personal computer users and management staff are catching on

computers were regarded as toys, not a source of revenue. Now companies see IBM making $... revenue from it, undermining major accounts which had previously been with IBM."

She predicted that over the next few years the market for small suppliers would shrink to the point where they would only be left with specialist niches while the next generation of IBM machines would be "virtually unable" to run other manufacturers' software.

Susumu Aizawa, senior managing director of Epson, told the conference: "The development market uffers little praspect for relaxation, even to companies riding the crest of the technology wave."

Epson will be concentrating on the portable computer in response to what Aizawa sees as a market demand. The market is more

"Europe must get together on: infrastructure facilities, education, R+D, and software"

likely to provide the impetus for these machines than any technological breakthrough, and this may prove to be true for other developments as well, he said.

The main disadvantage to portables at present are poor screen resolution and higher cost, according to Aizawa. He proudly displayed a 640 by 200 dot liquid crystal display which he said could be produced economically.

A machine capable of being carried for at least a mile by a 10-year-old and which could operate for 10 hours on its own batteries, with 256 Kbytes of RAM and uaing the MS/DOS operating system would be available in the US late next year, he said.

The last word inevitably belonged to IBM. The market dominance achieved by the company was summed up by Leister who, when he heard ACT boast of 100 orders a doy, quipped: "That's about what IBM must receive in a microsecond."

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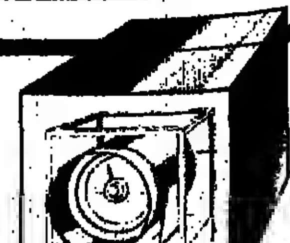

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MICRO NEWS

HP merges its micro families

HEWLETT-PACKARD is taking microcomputers seriously. It is trying to bring order into its variety of personal computers ond workstations, merging the present set of distinct product families into a continuum, stretching from portable computera to 32-bit engineering workstations.

"There were a lot of HP divisions involved with personal computers," says Cyril Yansouni, general monager of HP's persooal computer division. "We started looking anew at the way we approsched personal computers, at the organisation that was needed to focus attention so that HP was a success with personal computers. We stopped and took stock."

Popular processors, particularly the Motorola 68000 family and industry standard operating systems Unix and MS-DOS, lie at the core of this new tack, allied to modular design of hardware, and a unified user interface across the range.

HP is taking a stroog position on Unix as its preferred operating system for this unified range, but is taking on MS-DOS too. Having one main operating system across many machine families will allow the transference of languages and applications from machine to machine much more readily.

A run only Unix environment is coming, to get oway from the need for volumes of mass storage to cope with a full Unix environment. It is being developed for a transportable low end machine, to be much more compatible with present Series 200 models than the current eight-bit series 80s.

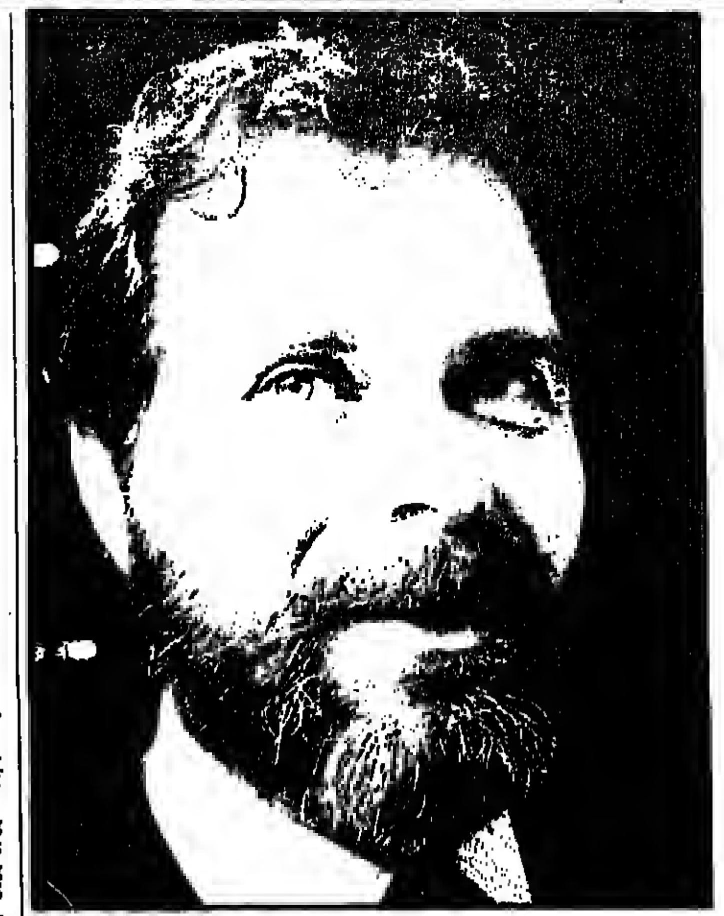
"MS-DOS is looking more like Unix all the time," adds Ysnsouni. "We want to converge the two. The run only Unix environment is about what MS-DOS should be a couple of generations on. MS-DOS is becoming the low end of Unix."

But there are worries among some HP users thst the company's new emphasis on operating systems like Unix and MS-DOS will lose some of the attractive features of the HP products.

There is a worry that in keeping up with fashion, HP will move away from the things users turned to HP for.

The HP Basic User Group is a 150-strong band of people using Basic on micros which Yansouni faced at a meeting last week.

"Many of our usera may write short programs they use only once," says Basic User chairman Chris Mattingley. "It is not performance that worries them but the ease of writing their own programa."



PALLADINO . . . "It is the timing of the product offerings."

Top end makers report good health

MANY micro makers are feeling the pinch, but at the opmarket end of the scale life is healthy. American-based Alpha Micro has just turned in record half year profits and brought out a new expanded memory model, while fellow US builder of 68000-based machines Sage is equally bullish about its prospects.

"It is the timing of the product offerings," reckons Alpha Micro's managing director of European operations, Len Palladino. "The concept of multi-user multi-tasking machines is so right. The minute we talk to people about the moehines they are sold on them."

Palladino says that the main thing Alpha Micro needs to do now is present the products in a better way. Many of his dealers sell the machines alongside IBM PCs – they do well in picking up sales where something more thon a stondalone sort of 16-bit machine is needed. Otherwise the company does not have high visibility.

A proprietary operating system, Amos, does not help, however good Alpha Micro reckons it is. So there is a Unix offering on the way, and a plug-in card that runs Concurrent CP/M.

Palladino says that Amos's features sell the system once people actually get around to looking at it. "But if you don't have Unix, people just won't look at you. It's the way in."

There is also a perceived need for more memory, which is why the company has just brought out its AM1000E model, with doubled RAM – 256K standard, expandable to 512K – and 30 Mbytes of hard disc, rather than 10 Mbytes.

Meanwhile at Sage, founder Rod Colman is finding similar benefits from his machines being compared with IBM PCs. "When anyone gets involved and compares Sage with IBM PCs, we come out very well," he says. "The problem is getting people to look at us in the first place. We're a dark horse."

Both Coleman and Palladino agree that the present problems foced by other micro companies – Osborne, Fortone, Victor, Wicat and others – make life different on the venture capital front.

"Growth hogs cash," says Coleman, "so we are always looking for more on the right terms."

Inmos produces UK chip

by Caroline Burgess

THE first UK designed Inmos chip, a 64K dynamic RAM arranged as 8K by eight bits, is coming off the US Colorado Springs production lines. Volume production at Inmos'a Newport plant should start early next year.

Called the IMS 2630, it adds to Inmos's range of 64K DRAM chips, which, until now, have been designed in the US. "It is the first chip of its type designed in the UK and one of only two in Europe," said an Inmos spokesman.

The IMS 2630 will be marketed as a cost effective alternative to 8K x 8 static RAMs, which are seen by Inmos as having a growing market, especially for the eight/16-bit microprocessor syatems.

It has access times of 120 or 150 nanosecondа, with hundred piece pricing at £16 and £13.34 respectively. No orders for the new chip have been finalised, but Inmos claims it has a lot of interest.

"The recession is over, the sales in general are picking up," said the apokesman. Inmos is still seeking additional private sector finance to aid its development programme.

Micro News is compiled by Robert Parry

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COMPANY NEWS

Fast delivery pays off for disc firm

by Philip Hunter

FAILURE of major disc drive makers to deliver spare parts inside three months has created a niche for the UK company Meltek Data to achieve rapid growth in the last two years.

Set up by managing director Alan Mosley in 1981, the company recorded £87,000 turnover in its first year, £415,000 in 1982, and is well on the way to £1.4 million for the year ending December 1983.

"We are shooting for £2.5 million next year," says Mosley.

Meltek, based near Eton, has two main product lines; disc heads and air filters. Mosley says that by buying up spares from the major disc drive makers all over the world, he is able to offer them much quicker than the big distributors, which typically take four months.

Meltek offers a 24-hour delivery service in the UK, and guarantees delivery within two days anywhere in Europe.

In addition Meltek can repair the lower technology heads like the Diablo five or 10 Mbyte top leading versions.

"A lot of our customers never have to buy new heads," says Mosley. The list price for a head of a main CDC drive is about £240, while Meltek's repair service costs £80.

Another problem with disc drives is air filters, and Mosley now supplies them for all main makes of drive including Control Data, DEC, Data General, Ampex, Diablo and Pertec.

"We are able to bring in new products all the time," says Mosley.

So far Meltek has been funded entirely on its own profits. But that will change next year when the company plans to start manufacturing its own air filters, probably by buying into an existing maker of filters for some other application such as air conditioning.

Mosley will seek outside finance for this. "People are clamouring to lend us money," he says.

A placing on the Unlisted Securities Market to raise £1 million also looks likely next year when the company has the necessary three-year trading record.

The company is also changing its policy on public relations and marketing, on which it has so far spent nothing.

GRAHAM . . . "Trying to beat Alvey at its own game."

BIS will boost staff to 1,000

by George Black

THRIVING financial systems house BIS is joining in the recruitment drive for software experts and expects to have 1,000 employees by the end of February, 150 more than at present.

Business Intelligence Services of London needs the extra staff for several large-scale projects due to be completed in the next year.

Among these is a real time system to control the foreign currency deals and lending of the international banks which is to be announced "within 90 days", according to BIS Software managing director Roger Graham.

Another is the Modus applications generator which is now due for launch at the beginning of 1984. "We're trying to beat Alvey at its own game," said Graham.

The Modus design would boost programmer productivity in the way being sought by the national Alvey Programme directors, he added.

"Our concern with Alvey is that we want to get things done and don't want to spend a lot of time putting up a proposal to get 50% government funding. So we've got on with it on our own and may therefore not be eligible for any Alvey money – though we [illegible] qualify under the software [illegible] ducts scheme."

BIS 1983 Review sees the [illegible] pany entering its 20th operati[illegible] year in healthy shape. [illegible] chairman Brian Allison [illegible] happily on the achievement [illegible] turnover around £23 million [illegible] pre-tax profit just under £2.[illegible] lion. This compares favo[illegible] with the previous year when [illegible] had income of £14 million [illegible] profit around £1.4 million.

In September 1982 a gro[illegible] leading UK financial institu[illegible] bought 55% of the equity of [illegible] which is one of their chief te[illegible] cal suppliers. BIS has been p[illegible] cularly strong in the overseas [illegible] earning £2.6 million in export [illegible] over £13 million from re[illegible] made abroad. It has acqui[illegible] majority interest in the IBM-ba[illegible] communications specialists, S[illegible] 3 of Mons, Belgium.

The firm's holdings in Mac[illegible] tosh International, BIS-Sh[illegible] and Dorset Developpment of [illegible] were all boosted to more th[illegible] three-quarters.

BIS Software, which contri[illegible] 40% of group revenue, op[illegible] new offices during the year u[illegible] review in Toronto, Los An[illegible] and Miami.

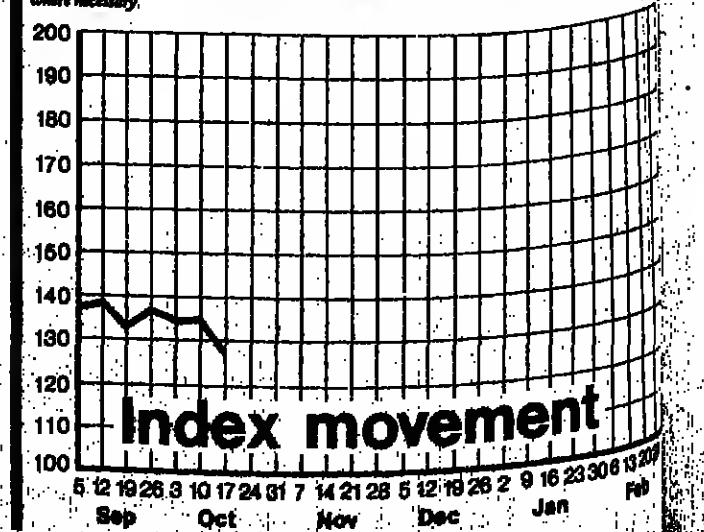
SHARES TABLE

The shares table, which is specially compiled for Computer Weekly, [illegible] selected computer companies that reflect the state of the computer industry.

Date 14/10/83 Index 127.40

Pence 1983 High	Pence 1983 Low	London Stock Exchange Stock	Pence Price	Pence C'nge	$ 1983 High	$ 1983 Low	US Stock	Price	C'nge
376	277	Ahlingworth (10p)	281	+4	29	18¼	Amdahl	[illegible]	[illegible]
545	240	ACT (App Com) (25p)	386	-63	80	72¼	Apple Inc	[illegible]	[illegible]
275	246	Atlenus Comp (10p)	276	+18	50	34¼	Auto Data Pro	[illegible]	[illegible]
86	41	B. Boy Kent (25p)	71	-7	62¼	43¼	Burroughs	[illegible]	[illegible]
193	124	Chubb (20p)	138	-7	18	7½	Comp Auto	[illegible]	[illegible]
178	128	Cole Group (25p)	172	–	23	17	Comp Sciences	[illegible]	[illegible]
400	152	CASE (20p)	378	-30	14¼	8½	Comshare	[illegible]	[illegible]
280	200	DPCE (5p)	223	+3	62½	38¼	Control Data	[illegible]	[illegible]
258	173	Datastream (5p)	173	-20	81	37¼	Cray Research	[illegible]	[illegible]
668	540	De La Rue (25p)	582	-8	61¾	41	Data General	[illegible]	[illegible]
378	284	Extel (25p)	373	+10	27¼	18¼	Datapoint	[illegible]	[illegible]
688	411	Ferranti (50p)	548	-64	137¾	96	Digital Equip	[illegible]	[illegible]
248	183	GEC (5p)	183	-1	41	23½	E'tic Data Syt	[illegible]	[illegible]
82	56	ICL (25p)	56	-2	18¾	8¼	Gen Automation	[illegible]	[illegible]
83	41	Kalamazoo (10p)	50	-1	43¾	18¾	Gould	[illegible]	[illegible]
378	276	Kode Int (25p)	335	-2	81	38¾	Harris	[illegible]	[illegible]
628	270	Memec (10p)	608	-17	48	37	Hewlett-Packard	[illegible]	[illegible]
190	130	Muirhead (25p)	140	-2	125¼	86	Honeywell	[illegible]	[illegible]
680	458	N'market (1981) ($0.05)	625	-41	44¼	20¼	Intel	[illegible]	[illegible]
2700	867	Norsk Data	2500	+175	133¾	95½	IBM	[illegible]	[illegible]
330	207	Office & Elect (25p)	221	-4	71¾	64½	Litton Ind.	[illegible]	[illegible]
1238	718	Philips Lamp (F1 10)	1010	-32½	12¾	12¼	MDS (Mohawk D)	[illegible]	[illegible]
266	178	Plessey (25p)	203	-7	32¾	18	MSA (Mgmnt Sci)	[illegible]	[illegible]
50	18	Quest Auto (10p)	22	-1	18½	9¼	Mngmnt Assist	[illegible]	[illegible]
287	184	Racal Elect (25p)	184	-8	18	9	Modular	[illegible]	[illegible]
320	225	Star Comp (10p)	295	-30	148	84½	Motorola	[illegible]	[illegible]
510	275	Systems Des (10p)	495	–	57	28¼	National Semi	[illegible]	[illegible]
222	214	Telemetrix	222	+8	133¼	87½	NCR	[illegible]	[illegible]
618	418	Thorn-EMI (25p)	579	-40	28½	24	Perkin-Elmer	[illegible]	[illegible]
177	128	UC&T (50p)	128	-17	28½	15	Prime	[illegible]	[illegible]
187	130	United Leasing (20p)	180	-8	55¾	44½	Raytheon	[illegible]	[illegible]
		Unlisted Securities			37½	25¼	Signal	[illegible]	[illegible]
118	114	Acorn (1p)	114	-4	47	33½	Sperry Comp	[illegible]	[illegible]
128	78	Bus Comp (10p)	80	–	24½	18	Storage Tech	[illegible]	[illegible]
130	87	CPU (5p)	118	-2	36¾	24¾	Tandem	[illegible]	[illegible]
160	118	Cifer (10p)	183	-7	62¼	37¾	Tandy	[illegible]	[illegible]
516	148	Consult (C&F) (10p)	430	–	171	100¾	Texas Inst	[illegible]	[illegible]
276	187	Feedback (10p)	266	–	28½	18½	Tymshare	[illegible]	[illegible]
314	128	Imm Bus Sys (10p)	128	-18	40¾	31¼	Wang Lab B	[illegible]	[illegible]
218	188	Int'Europe Tech (20p)	217	-2	17	8½	Wyly	[illegible]	[illegible]
64	27	J.B.D. (5p)	38	–					
96	70	M.M.T. (5p)	80	–					
300	160	Memory Comp (M) (10p)	245	-20					
625	205	Micro Bus (10p)	500	-25					
640	205	Micro Focus (10p)	620	-8					
440	210	Microgen (10p)	405	-20					
227	136	Miles 33 (10p)	223	-4					
84	36	Mnemos (10p)	36	-5					
240	188	NMW (£1)	202	-10					
218	170	Real Time (5p)	218	+8					
120	81	Rolfe & Nolan (10p)	112	-2					
187	110	ScanData (10p)	118	-20					
95	78	Tech for Business (10p)	80	–					
80	63	Trident Comp (10p)	67	–					
107	86	Zygal Dyn (5p)	96	-3					

The table shows the closing prices in London on Friday and in America on Thursday. The Sh[illegible] Index is based on the prices of the UK companies in the table. Highs and Lows have been adj[illegible] where necessary.



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[هكذا من الأصل]

PROFILE

Man with mission arrives at NCC

ASHWORTH . . . "Called to be chairman rather than a spear carrier."

JOHN Ashworth, vice-chancellor of Salford University since 1981 and newly-appointed chairman of the National Computing Centre, learned the rudiments of microprocessors in 1976 while becalmed in a sailing boat off Clacton.

He was then the youthful professor of biology at Essex University and had just been seconded as chief scientist to the Central Policy Review Staff. A colleague from the computer science department convinced him in that boat that micro-electronics was the key area he should address in his new job of helping to formulate government policy.

"That Christmas I took home a Ferranti F100L chip and settled down to program it in machine code to play the tune Three Blind Mice," he says. "That taught me the basics as well as the importance of user friendliness."

Ashworth finally left Essex in 1979 to work full-time in the Cabinet Office as an under-secretary until his dramatic switch to Salford in September 1981 at the age of 42. That July Salford had been hit by swingeing cuts of over 40% in its annual grant, and Ashworth found himself having to sort out the mess.

Under Ashworth Salford has recovered better than the other technological universities which were also badly hit.

"The big advantage I had was that I was a new boy, and my planning procedure had to be a bottom up process – there was no question of closetting myself with intimates and coming up with an imposed plan. Instead we had to produce a consensus policy, rather Japanese-like, where the whole became more important than the sum of the parts, and that approach has succeeded."

Ashworth sees his two jobs, running Salford and, since June, heading the NCC, as complementary. "The two organisations are much the same size," he says.

by John Riley

"Salford has a grant of £12 million and a staff of 400, while the NCC has a turnover in the region of £15-20 million and 360 staff.

"I see Salford as my Dunkirk, with re-shaping accompanied by an overall contraction, and the NCC, with its context of broad expansion, as my Normandy."

He values his appointment to the NCC as it gives him experience of the commercial world to balance out his experience of government and the academic world. He still expresses surprise that he was called "to be chairman rather than a spear carrier."

What does he see as the future role of the NCC? "It's early days yet," he says, "but the environment is changing fast. The NCC was founded to encourage and protect an embryo computer industry, but that is not the case any more and the NCC is less dependent on government funding."

Ashworth sees change as inevitable but not revolutionary, and looks for close links between the NCC and the Alvey initiative. "It should be the task of the NCC to carry out national missions. My five years in the Civil Service brought me into close contact with Brian Oakley, John Alvey and others, and that experience will benefit the NCC."

He holds out great hopes for the Alvey programme: "For the first time the government has committed itself to the concept of pre-competitive enabling technologies, with a small and highly talented team with the right mix of insiders and outsiders. It is that sort of mix that always makes the Civil Service good in a crisis, as in the last war."

Having gained his "battle scars in Brussels" as the UK representative on scientific committees, Ashworth is sceptical about the future of European co-operation.

"The Esprit programme is very small, like everything in Brussels," he says, "and it will be slow and subject to consensus, which means it will be governed by the lowest common denominator – it is only the large number of very good civil servants that keeps things going there."

Ashworth believes that British people can be enticed back from the US to become involved in our national IT efforts. "From my own experience of working in the US, I couldn't help noticing that when two expatriate Brits meet there the men spend their time convincing each other how much they are enjoying life, while their wives end up in the kitchen talking about the horrors of life in the US.

"Brits can be persuaded back," he believes, "even at personal cost, provided you can convince them of the long-term future and that their careers will develop. The Alvey programme satisfies that.

"The real problem is not that of the best and brightest – Oxbridge does right by them – but of the better than average people. Not so much those with inventive ideas, but those with the pedestrian skills to turn them into products. That situation is as true of the computer industry as of the steel industry – we don't train enough engineers and designers, and they are undervalued in our society."

Ashworth's favourite recreation, sailing, is not easy to follow from Salford. He has tried sailing on Ullswater "but I find that when you sail on lakes there's only one direction to take and that is clockwise." So he has bought a cottage in the Lake District and taken up fell walking instead.

When in London, he is not to be found in clubland. His retreat is the Royal Society of Arts, which he uses as his London base. He is proud of his fellowship there. "Its full title is the Royal Society for the Encouragement of Arts, Manufactures and Commerce," he says. "It is an 18th century institution to encourage practical inventions and is the only forum where artists, designers, financiers and scientists can mix and have always done so," he says.

That sentiment is in line with his basic belief that the "three worlds, academic, government and industry" should be increasingly mixed.

"The problem is that people in Britain choose their career path too early and stick to it. I believe that it is good for people to make dramatic moves between the three worlds."

DOWNTIME

"The computer's leaving."

Chipping in for a prize

I BET you thought that no one actually went in for my whizzo competitions. Not true. My picture of the chip mine a few weeks ago prompted Ron Wylie to suggest that the mystery figure was none other than Sir Clive Sinclair digging up the chips at Cambridge.

"This is how he makes a £14 million profit on a £54 million turnover," said Wylie.

P. Yarnell, on the other hand, thought the man with the wheelbarrow was mining ICL chips in order to extract the valuable silicon.

"This process is known as Chip Handling And Destruction, or CHAD," suggested Yarnell in a vain attempt to sway the judges' decision.

But as no one got the correct answer, that the picture is part of US giant Hughes' new advertising campaign, I have no choice but to award the fabulous prize of an evening out with my good self to Bo Derek.

Come and collect, Bo.

Red warning

SIR Michael Edwardes is probably looking forward to a relaxing time at ICL apropos of its lack of militant trade unionists in the mould of "Red" Robbo, alias Derek Robinson, the Longbridge convenor who hit the headlines during Edwardes' term of office at BL.

But a cursory glance at the ICL telephone directory should cause a shiver of reminiscence to run up Edwardes' spine.

There are no fewer than six D. Robinsons listed.

Vanishing trick

THE perils of electronic mail systems were a hot topic at the *Financial Times* personal computer conference.

One user complained that after moving into a single building, the mail generated doubled almost instantly. The solution, according to Joel Schwartz from DEC, is simple. All you do is write an editing routine which dumps any copied letter or memo longer than eight lines. Virtually all of the mail vanishes.

Crack down

THE time-honoured practice of patching into somebody else's computer and generally stretching your ingenuity has finally moved into the big time in the US. For the FBI, possibly made aware of the activities of hackers by the movie *Wargame*, has now moved itself to crack down.

And a handful of young hackers have received the rude surprise of having teams of G-men bursting into their homes and confiscating their micros.

Chad

Filling up in a hurry . . .

ACCORDING to a leading US scientific publication, this year's big thing in offices is an add-on for VDUs. Known as TBIC, it allows workers who are playing space invaders to fill their screens instantly with totally meaningless but impressive financial statistics.

TBIC stands for, as if you hadn't already guessed, "The Boss Is Coming."

10 YEARS AGO

FROM COMPUTER WEEKLY OF OCTOBER 18, 1973: Logica managing director Philip Hughes announced the formation of its first fully operational overseas subsidiary, Logica Benelux . . . CDC bought ITT's Data Services in the US . . . Programmers at GEC Computers announced a three-day strike in protest at pay rates after management offered an upper salary limit of £2,280.

PLATFORM

Peter Charlton is sales development manager of Milestone Leasing.

Leasing – the natural way into micros

MOST manufacturers of computers strive to achieve a comprehensive computer package capable of providing a wide business operations and able to grow as the demands of the customer's business increase. To do this the computer itself needs to be versatile but it also needs to play host to a variety of peripheral equipment.

It is hardly surprising therefore that leasing is today the natural option for micro acquisition. The privilege of ownership virtually becomes a burden when considering such expensive and rapidly changing technology.

There are many reasons for arguing the case for any form of sales aid leasing. For the benefit of any companies considering lease, sale or acquisition these are:

To the Customer:

1. The equipment can be installed and operational without a need for capital expenditure.
2. Rentals are fixed throughout the term of the lease and they are inflation proof.
3. Rentals can be financed by the revenue earned or savings made by the equipment.
4. Accurate forecasting, cost and budgeting in respect of asset and the customer's business.

To the Supplier:

1. Leasing can make a sale an on-the-spot decision and one made by a manager authorised to commit revenue expenditure.
2. Immediate payment of invoice and elimination of bad debt risks.
3. An on-going liaison with the customer leading to more regular upgrading or replacement of equipment thus providing improved sales opportunity.
4. The responsibility of credit control is shifted from the supplier to the leasing company which is in a position to give credit clearances quickly, speeding up the transaction.

The facet of leasing that makes it so compatible with micro acquisition is its flexibility. Much has been done to streamline administration procedures, credit clearances and speed of lease acceptance.

The equipment can be changed, upgraded, even downgraded, at any point during the lease term.

The "office of tomorrow" will revolve around new technology and it is the computer industry and the telecommunications industry, developing in parallel, that are making all the running towards the new office concept.

In the same way that computers co-exist with their families of peripherals, so the telecommunications industry now favours modular installations that can easily be extended or complemented by some of the most sophisticated peripheral equipment such as fax machines, teledata, voice ... computer networking, etc. As such equipment is compatible with the sales aid leasing concept ... will certainly demand the flexibility of acquisition.

Peter C...

ComputerWeekly
Quadrant House, The Quadrant, Sutton, Surrey SM2 5AS
Thursday, October 20, 1983

Has System X's time come at last?

FOUR years ago, at Telecom 79, the UK surprised the world with its showmanship and its ambition.

Before the show, which is run every four years by the International Telecommunications Union, the UK had allowed its telecommunications industry to slip from prominence to being an also-ran; it had experimented with digital switching well ahead of the field only to let its lead slip.

But finally it pulled a working prototype out of nowhere, representing what it claimed was an integrated family of world-beating digital switching and transmission systems. This was System X.

Was this to be taken seriously? Even the name defied credibility. The most significant part of the world market for digital systems was already sewn up, people said, either by dominant or indigenous suppliers. There was gross overcapacity in the world's production facilities, a competition would be cut-throat. A country whose industry had been in such marked decline would stand no chance.

Since that time there has been rapid change and frantic activity. Companies have rushed to bring out digital systems. Governments have pumped money into their proteges. Technology, commercialism and politics have vied for position as dominant influences. Accusations have flown around.

This time at Telecom 83 in Geneva next week, System X is ready to sell. Overseas telecomms authorities, however, are still reluctant to buy any system that has seen little service, even in its home market. Perhaps the firm contractual orders British Telecom has placed for the first 24 production versions of System X exchanges will help.

Doubts about System X have been aired very publicly in the UK, more publicly, it is said, than would have happened in any other country with its national interest at heart. But the telecommunications industry has made some credible replies: British Telecommunications Systems did not close because it failed – on the contrary it was a marketing and market research exercise that fulfilled its function.

This time around, the UK telecommunications industry aims to show its capabilities in some depth – not just the highlights, and without the hullabaloo.

Poor Ken misses out

KENNETH Baker is beginning to take the role of the perennial lady in waiting. The Information Technology Minister, who shot from relative obscurity to national attention as a result of IT 82, has been tipped, and failed to gain, a number of Cabinet posts.

Cecil Parkinson's embarrassing departure from the Department of Trade and Industry seemed ready-made for Baker. He would be the logical man to step into the breach. But to turn a cliche, "the man does intervene too much".

Parkinson's stay at DoTI was too short for any real policy to be formulated. There was no question that he objected strenuously to government intervention to support or promote industry. It was widely believed that his selection to head the newly-amalgamated departments of Trade and Industry was motivated by the Prime Minister's desire to tighten up on what she saw as the too liberal regime of Patrick Jenkin.

Norman Tebbit, who succeeds Parkinson, will be set to carry forward the same objectives. There is a great deal of infighting going on at the moment within the DoTI between those who represent trade and those who represent industry. Tebbit, like Parkinson, is expected to champion the cause of trade. There is, according to the present government's philosophy, no real need for a department of industry; the free market will take care of itself.

The government was never overly keen on the Alvey Programme, a prime example of state intervention. Jenkin and Baker, who have been credited with fighting hard to get the Cabinet's approval, could not be said to have profited from their efforts.

Baker, and the industry department, will bear careful watching over the next few months.

1984 and all that . . .

THIS week's example of the strange things people say about computers was sent in by Richard Adams, of Cumnor, near Oxford, who wins £5.

Counting to the base 10 is old hat. Computers and other idiots do it.

Daily Telegraph

LETTERS

How reliable is the Newcastle connection?

IT was with a mixture of amusement and incredulity that I read your report on the debate at the European Unix User Group in Dublin on Unix United (*Computer Weekly*, September 22).

I wasn't at the Dublin meeting, but unlike those seemingly so keen to offer disparaging comments, I have actually been using the Newcastle Connection, and I would be grateful for the opportunity of correcting a very misguided and erroneous picture of this system.

Unix United has been installed in the Computer Science Department at Keele for about one year. It runs on a PDP-11/84 and two LSI-11/23s, connected by a Cambridge Ring. To state that the Connection is unreliable, as one speaker is reported to have done, is nonsense. It is at least as reliable as Unix itself, and at Keele it is an integral part of the user service. It has stood up remarkably well to some very demanding applications in a program development environment.

It is similarly completely incorrect to claim that the Connection is based around the Cambridge Ring. Currently at Keele we are working in uniting the system with that at Newcastle via a 1,200 baud modem link. Later it is planned to use the PSS service for this link. Indeed the communications network software is regarded as a separate issue within the Connection and is implemented in a highly modular fashion.

It is well known that the Cambridge Ring, when used with interrupt-per-packet access logic, cannot offer high transfer rates. This is nothing to do with Unix United, however, and to imply that the Connection is "grossly inefficient" shows a lack of understanding of how it works.

May I suggest that those making comments of this nature at least read the paper in *Software Practice and Experience (1)* first.

At Keele, our inter-machine transfer rate is only about 1.5 Kbytes per second, yet users are prepared to live within this limitation because of the increased facilities available. We observe that the "distributedness" of our Unix United system is functionally invisible to users who can access (for example) specialised facilities on one machine in the same way as a file on their local machine. The basis for the design of Unix United is recursive structuring, in which the total system should be functionally equivalent to the individual systems of which is it composed.

Hence our "consumer report" on Unix United – based on real use – is one of considerable enthusiasm, and we shall unite all our additional Unix systems when they are purchased. The debate at Dublin seems to have been motivated by prejudice rather than rational argument.

DR. K. H. BENNETT
Department of Computer Science,
University of Keele.

Reference: D. R. Brownbridge, L. F. Marshall, B. Randell. The Newcastle Connection of Unixes of the World Unite! Software Practice and Experience vol. 12, December, 1982, pages 1147-1162.

Universities out of touch with software needs

IAN SOMERVILLE'S comments at the IFIP'83 conference in Paris (*Computer Weekly*, September 29) are as refreshing as they are accurate.

We wholeheartedly agree that many universities are out of touch with the real life needs of software development and engineering, and can only wish that they would follow the example of Sommerville's own Computer Science Department at Strathclyde University.

This year we will have recruited over 20 people, including system designers, analysts and programmers. But in doing so we have had little help from university authorities, whose recruitment boards we have often found to be unresponsive and inefficient.

Apart from the quality and relevance of computer courses, even their quantity is being cut in some cases. For example, staff levels in the Department of Computation at UMIST are being reduced against the department's wishes as part of across-the-board spending cuts.

Somerville states that "software engineering is the most urgent technological challenge which we face, but everything will disintegrate unless we can learn to write large, reliable and cheap programs".

DR ERIC HAWORTH
Managing director
Management Control Systems,
Manchester.

Why the new Olivetti CPS 32 computer never breaks down.

It's a well-established principle that two heads are far better than one.

And also a fundamental concept in the design of our CPS 32 computer.

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The system offers you its incredible reliability at a singularly attractive price.

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WORKPLACE

Clinic is calling on doctors

by Caroline Burgess

DOCTORS are to get a look at how computers could transform their surgeries by the year 2000.

An exhibition called Clinic 2000 is to tour the UK to demonstrate how a computerised reception can cut down on administration work, allowing doctors more time with their patients, and how computers can aid clinical investigations.

It will also demonstrate computer-aided diagnosis and online data banks containing informotion on different treatments and drugs. Doctors visiting the exhibition con try out any of the oids on show.

Over the next two years the exhibition will tour postgrsduste centres, being updated as it goes. It is being run by a depsrtment of the pharmaceutical company Smith, Kline & French.

"Each of the exhibits exemplifies a particulor aspect of general practise in the year 2000" said Dr Sheila d'Sooza, who is in charge of the exhibition.

"Clinic 2000 has been devised to bring together a number of new developments and to alert doctors to the potentiol practical benefits that computers can bring to them and their patients" said d'Souza.

The exhibition is purely for reducational purposes. But it is based on o programme undergning clinical evaluation at the Govan Health Centre in Glasgow.

Smith, Kline & French has provided an educational service to the medical profession since the 1950s. It pioneered the use of colour close circuit television for medical purposes in the UK and later the development of videodisc aids.

Drafted to the Falklands

TWO Datapoint micros are on their woy to the Falklands os part of a shipment for the construction of the inappoprlately named Mount Pleasant Airport.

The micros will form part of the first civilion computer installation on the islands and be used for local processing and data entry for a project planning system run by Elstree Computing ot Surbiton, near London.

The micros will be linked to London by an Inmarsat satellite with Datapoint's Datapoll and Remdos communications software doing the necessary protocol conversion. The Remdos package will also allow program bugs that emerge during operation on the airport constructinn on East Falkland to be fixed from the UK.

Multiplan spreadsheet modelling will eventually be used to prepare progress schedules and reports on material use.

Electronics firms get a platform

BAILEY . . . Symbiotic relationship with National Electronics Centre.

ABOUT 30 computer companies are now taking advantage of cheap msrketing and product promotion facilities as members of the National Electronics Centre in London.

A year's membership of the centre, based at The World Trade Centre, next to Tower Bridge, costs a small company about £2,000. Por this the firm is given space to exhibit its hardwares, and free use of the centre's facilities, including an advanced video theatre, use of an exhibition centre to stage open days, ond aid with exports.

The centre will also arrange press conferences, and provides low cost catering facilities, with the added incentive of free membership of a yacht club.

"It's a forum for members to do business among themselves," says commercial maoager Douglas Mitchell.

Members use the centre as a marketing platform, and as a London sales office, Mitchell adds.

Membership can give small young electronics companiea a vital leg-up into the world of public relations. But there are many big names among the centre's 130 members, including Texas Instruments, Ferranti, Hewlett Packard, Commodore and Plessey. For these companies the facilities for holding press coa ferences and assistance with overseas marketing are two attractions.

The centre was set up in 1979 by Jeremy Prosser, the present managing director, who also runs his own scientific instrument firm.

The centre has so far maintained a 60% onnual growth in turnover, which last year reached almost £500,000. Mitchell estimatea that within two years the centre will run out of space at the Trade Centre.

He joined the centre in 1982 two years after selling his own electronics company, Solid State Controls. He brought with him years of experience io public relations, which he says has helped ro promote the centre and its member companies.

Douglas has used lis overseas contacts to arrange trade shows obroad, and visits by foreign delegations. He has also helped a few companies to get their products shown on BBC's Tomorrow's World programme.

So far the only criticism from members is that the centre has not put enough effort into promoting itself. The emphasis has been on keeping costs down, and even the annual subscription of around £25,000 chsrged to the largest members is low when compared with their annual marketing budgeta. A stand at a three-dsy trade show, or a half-page advertisement io a trade journal each costs about £3,000.

One member happy with the set up is msker of card-based vending systems GiroVend. The company's monaging director, George Bailey, talks of a symbiotic relationship between his company and the centre, with both parties promoting each other.

"As I sell more stands, Douglas cuts uur membership price," Bailey enthuses.

How to lease a line to a user

FRED JENNINGS of software and systems house Data Logic has prepared a series of reports on networks, called Jensheets, which *Computer Weekly* feels deserve a wider audience in Workplace. Below is the second Jensheet:

Leased telephone lines

In the UK, leased telephone lines are supplied by British Telecom and are fully dedicated to the customer's data communications operation.

The two main types of leased line configuration are (a) point-to-point circuit which connects geographical point A to geographical point B, each eircuit requiring two modems (one at each end) to produce a modem link, nnd (b) a multi-point circuit (a single star configuration), supplied by BT, which consists of a main four-wire line from the main (computer) central site to a British Telecom branehing panel located in a BT telephone exchaoge. Four-wire lines (called spurs) radiate from the branching panel to remote (terminal) locations. It is possible to have two branching panel locations on one multi-point circuit and this is known as a double-star configuration. There is a limit imposed by BT of up to 12 spurs per multipoint circuit (single or double star).

One multi-point circuit requires one modem conoected to the main-line at the main site, aad one modem connected to each spur line in each remote location. If there are N spurs (remote locations), then the number of modems required for a multi-point cireuit is N+1.

A multi-point network can also be configured from a number of point to point circuits by using a BT approved branching panel supplied by o modem manufacturer. In this case the branching panel is installed on the customer's premises and the main-line and the spurs are standard four-wire point to point leased lines.

Multi-polnt eircuits are normally used (a) to reduce line costs (onnual rental); (b) to reduce modem costs, for example if six remote locations were connected to a main site by six individual point to point circuits this would require 12 modems, but using a multi-point eircuit reduces the modem count to seven, and (c) to reduce the maximum number (and cost) of eommunications interfaces required by the central computer system.

Intelligent terminals are normally used on multi-point cireuits, the most common type being clustered display systema.

A half-duplex poll/seleet type of line protocol is used on multi-point lines. The main computer system is the master and controls all the data transfers between itself and the terminals (slaves).

A leased telephoae line is terminated in a customer's premises as a two-wire termination (presentation) or o four-wire termination (presentation).

The number of wires in the British Telecom cable (local end) conneetiog the customer's premises to the nearest BT telephone exchange corresponds to the oumber of wires in the presentatloo (ie a two-wire presentation requires a two-wire local end).

A leased telephone circuit has two local ends (one at each end) and all the other sections of the circuit which are not local ends have a four-wire presentation. Therefore in the case of a circuit which has a two-wire presentation, 2/4 wire conversion units are fitted in each local telephone exchange which serves a local end.

A modem (modulator/demodulator) which is connected io a customer's premises to a two-wire line, sends and receives data over the same two wires (pair). A modem connected to a four-wire line seods dsta over one pair and receives dota over the other pair.

Bach pair of wires in a local end telephoae cable will pass frequencies (tones) within a given band (bandwidth). This bandwidth is limited by electronic equipment within the telephone network to a range of 300 cycles per second to 3,400 cycles per second (hertz). To music lovers these frequency limits approximately relate (on a piano) to the 'D' (293.7 hertz) one whole tone above middle 'C' to the 'A' (3,520 hertz) four octaves and a sixth above middle 'C'.

A four-wire-termination (preseotation) has twice the bandwidth available to that of a two-wire terminatioo (presentation). Synchronous modems which operate at 2400, 4800, 7200 or 9600 bps always require o four-wire presentation when they are connected to leased telephone linea.

There are four grades of BT leased telephone line which are specified in terms of Schedule A, B, C and D. In simple terms Schedule D is the best grade of line and the most expensive, and Schedule A the worst grade and the least expensive.

Before 1979, BT specified its leased lines by tariff rather than by schedule. There were four tariffs known as S1, S2, S3 and T. Tariff S1 can be roughly equated to Schedule A and Tariff T to Schedule D.

To determine the cost of a leased line contact the nearest local telephone manager's office and ask for the phone number of Datel Services.

PUZZLER

A NUMBER of children were on a treasure hunt for parcels hidden in a field. There was one parcel per child bidden, and no child found more than one parcel. Of the children, one quarter were girls, and boys found twice as many red parcels as girls.

Of the blue parcels, one fifth were not found. All the girls found a parcel, and one quarter of all parcels found were blue; 28 of the boys did not find a parcel, and four fifths of the girls found red parcels. How many red parcels were not found. See page 73 for the solutioo.

Workplace is compiled by Philip Hunter

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PEOPLE

■ Ted McIver has joined Microdata Information Systems as public sector marketing manager. The newly-created post involves sales to local authorities, the health service, police, utilities, etc. McIver has 12 years' experience at senior level in local government.

■ Wang Labnratories Inc has appointed Ian Diery as vice-president, Western Europe. He remains managing director of Wang UK.

■ Atari International (UK) Inc has appointed Robert Harding (below) sales development manager. Previously he worked for four years with Sony as product manager for its video recorders and marketing its tape products.

■ Paul Palmer, a consultant with systems house Scicon, has been appointed chairman of the Medical Computing Group, which is being formed within Export IT. Palmer, who joined Scicon in 1969, will be head of a team comprising representatives from government, the computer industry and the medical, dental aad nursing professions. Its aim is to promote the export of British medical computing technology to world markets by acting as a reference point for information on systems available and market requirements. Palmer brings in the group experience in a variety of projects, including studies on the use of computers in hospitals, dental practices, general medical practice and NHS administration.

■ Russell Fairchild has joined Software Sciences as a business development manager in the systems division. He was previously marketing manager with Plessey Defence Systems. Andrew Lighting has also joined Software Sciences, as a senior sales executive in the systems division. He joins from GEC, where he was sales manager for GEC Viewdata Systems.

■ After two years in the lead role for SGS' microsystems marketing activities, Chris Smith has been promoted to the position of distribution and indostriol sales manager for the UK.

■ Frozer-Nash Group hos anoounced an expansion ond development programme fnr its consultancy subsidiary. J. E. Smith, has been appointed managing director of Frazer-Nash (Consultancy). He comes with experience of business development and new ventures with several companies including Chain, IIOC and John Brown – Earl & Wright. The other executive director, Dr J. F. Adie, has been appointed general manager with particular responsibility for the maintenance of Consultancy's technicol skills and to lead diversificatinn into new technology areas.

■ *Two training appointments have been made at Peachtree Software International.* **Yvonne McCaffery** *(above left) has joined as a training consultant for training services in a new training scheme. She was previously training officer with the Manpower Services Commission.* **Susan Forgie** *(above right) has been promoted to become manager of training services. She joined Peachtree in 1982 as a support consultant. Recently she was seconded to Peachtree in Atlanta, where she established international liaison and studied the company's training activities. She was also responsible for training agents in Singapore and South Africa.*

■ Roy Faibish, one of North America's leading experts on cable television, has joined British Telecom as o special adviser. His arrival strengthens BT's rapidly-developing cable TV operation. Faibish will advise senior BT management on the market potential for cable TV and related services, and on the preporation of franchise applications. He will also be closely involved with the organisation of cable operotions and marketing techniques.

■ Stanley F. Steward CBE has been appointed chairman of ERA Technology, following the resignation of Joseph E. Hinde. Hinde remains on the board as a non-executive director.

■ Computer Technology Ltd has strengthened its British Telecom sales team with the appointment of two sales executives. **John Souter** joined CTL in 1970. He worked as a pre-sales consultant on commercial systems and spent some time in CTL's R & D design division. He also worked for two years in pre-sales and post-sales support for the CTL range of computer systems. **David Halliday** joined CTL in 1981 as a consultant in the company's public sector sales group.

■ BASF United Kingdom has designated **Bryan Rigby**, presently deputy director general of the Confederation of British Industry, as managing director from January 1. He is a Fellow of the Institution of Chemical Engineers and has been with the CBI for the last five years.

■ Consultants (Computer & Financial), the financial software company, has made **Samuel Sydney Pochin** as managing director of its new overseas subsidiary, CCF (Hong Kong). Pochin joins from Peat Marwick Mitchell, Hong Kong, where he was senior data processing consultant with its management consultancy company.

■ Roger Dence has been elected to the boord of Charles Barker Lyons. He is head of CBL's Technology and Industry Division and will continue to be so. He joined CBL earlier this yeor following a career in technical journolism, industrial public relations and advertising and marketing, latterly as manager, market development and product planning, with STC Defence Systems.

■ Computer systems supplier Systime has appointed **David Watt** as liaison manager for its "satellite" operations. Selected employees have been encouraged to establish entrepreneurial groups with a franchise to assist in sales and support of market sector packages and bespoke projects. Watt joined Systime in 1976, after three years as a consultant.

■ Condial Communications Systems has appointed **Rosemory Doye** (above) as marketing assistant. She will promote Condial's activities in the voice-response, viewdata ond communications field. Doyle joins from Baric, where she worked in marketing and communications.

■ Safe Computing has appointed **Barry Fisher** as Philips business manager. He will be responsible for co-ordinating worldwide sales of Safe's PMS (Production Management System) with Philips, onder the two firms sales agreement, and for marketing, development ond maintenance of the system. Fisher joined Safe in 1976 and was promoted to UK operotions manoger of safe's Mini-Micro Systems Division in 1981.

■ Micro Solutions (UK) has appointed **Sukie Hoyle** to head up its new division dedicated to providing custom built Compsoft DMS Delta application packages. She was previously UK support manager for Compsoft.

■ British Railways has appointed **David Cobbett** in the new post of director, information systems and technology. He will be responsible for directing and co-ordinating the use of computer based information technology throughout BR through the newly established information systems and technology department. Recently he has been director of strategic studies, concerned with the main line electrification programme ond London commuter services.

■ **Kevin Dowling** has been made UK sales support monager by MDS Computer Systems (UK). Prior to joining MDS, Dowling was the customer service manager for ICL, responsible for the provision of engineering and product support for small systems in South-cast London and Kent.

Paul Bailey has been promoted to vice-president, European operations, for Digital Research Inc. In the year since his appointment os director of European operations, Bailey has established three European companies for Digital Research in Newbury, Munich and Paris. Bailey brought nearly 10 years' experience in graphics systems to Digital Research when he joined from Tektronix Europe. He was European marketing manager for graphics products with Tektronix.

DIARY

OCTOBER 24-26

Programming in C is a CTEC course held at CTEC's Loodoo centre. Other courses are beiog run throughout October and November. Details: Richard Lee, 01-251 4010.

IFIP is holdiag a working conference oo Optimisation In Computer-aided Design, in Lyona, France. Details: Vic Lane, Department of Systems and Computing Studies, North East London Poly, 01-590 7722.

OCTOBER 26

Finsncisl and Cash Mansgement Systems is a seminsr by Packsge Programs held at the Selfridge Hotel, London. Information from Chris Rawson, 01-633 0121.

The Acorn Computers: Past Successes and Future Plans takes place at UMIST in Manchester. Speaker is John Coll of Acorn Computers. Details: British Computing Society.

Engineering Design and the Microcomputer is being held at Brighton Polytechnic. Details: British Computing Society.

OCTOBER 26-28

Frost & Sullivan holds its Computer Software Packages seminar at the Mount Royal Hotel, Londoo. Details: Carolyo Budd, 01-486 0334/5.

OCTOBER 27-28

Cumac is holding its two-day conference combining the annual meeting and the Microdata Information Systems (ex CMC) annual presentation. Ladbroke Mercury Motel, Wotford, 9.45. Further details on 0442 42124.

OCTOBER 22

Expert Systems in Statistics is a conference run by the Royal Statistics Society at University College, London. It costs £25. Details: The Secretary, Royal Statistical Society, 25 Enford Street, London WC1 2BH.

NOVEMBER 2

Vehicle Routeing. BCS Mathematical Programming Study Group. The London School of Economics, Aldwych, London WC2, 6.30pm.

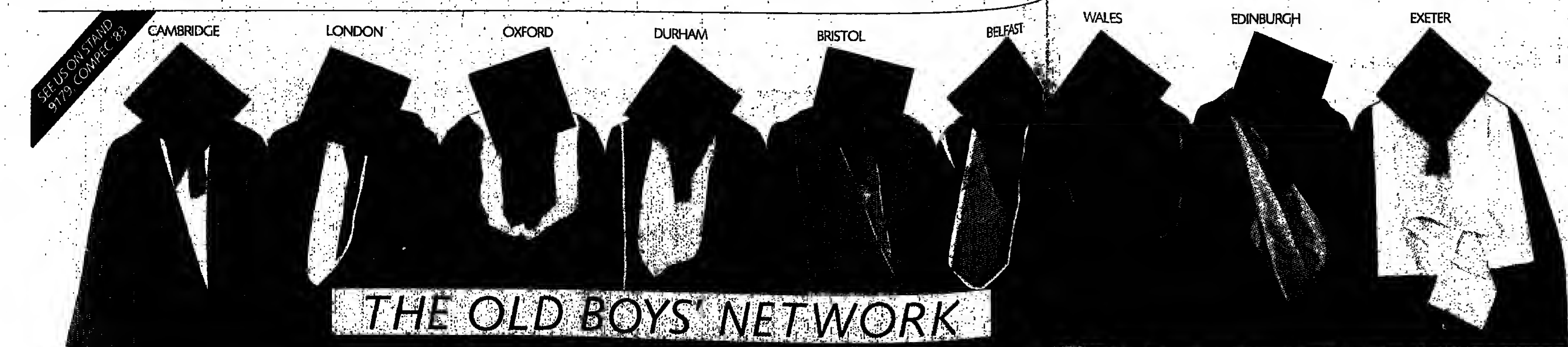
NOVEMBER 4, 5, 6

Brainwave, the consumer show for users of home computers, home video and home electronics. National Exhibition Centre, Birmingham. Details Clapp and Poliak on 01-747 3131.

CONFERENCE

■ THE world telecommunications industry is in the throes of a massive uphesval which is drastically changing its scope and direction. Carriers and service providers need to pay closer attentioo than ever before to an increasingly demanding market to find new ways to respond to its needs. In the US and Britain, this goal is being sought through freer competition, while many other industrialised countries are trying to introduce growing flexibility into the traditional monopoly framework. Equipment manufacturers have to form strategies, to address rapidly changing markets and technologies. There is a growing trend towards international allisoces, as companies seek to pool complementary skills and experience and share mounting development costs. These developments and their implicatioos for those involved in, or depeoding on, the telecommunications industry will be discussed at the *Financial Times* World Telecommunications conference to be held io Loodon on November 29 and 30. The full registration fee of £395 plus VAT is payable in advance.

Registratioos and enquiries should be addressed to: The Financial Times Conference Organisation, Minster House, Arthur Street, London EC4R 9AX. Tel: 01-621 1355.



The Universities had a problem.

They had difficulty communicating internally, let alone with one another.

They needed to network their computer systems and terminals to provide access to on-site hosts.

And also to the off-site facilities of the integrated academic network.

The Camtec JNT-PAD did just that.

As a PAD it links VDU's, printers and micro's into X.25 based local area networks.

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As an X.25 switch it links together PAD's, on-site and off-site X.25 hosts.

As British Telecom approved for connection to their Packet Switch network, it provides the connection to the Public Data Network.

The JNT-PAD is only one of a range of products within the X.25 and LAN fields manufactured in the UK by Camtec.

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Please send me full specifications for the JNT-PAD.

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CAMTEC

Joining networks together

ICL

COMPANY PROFILE

ICL is a child rapidly divorcing itself of all connection with a parentage which, at this point in its history, has contributed little except problems.

This may be harsh comment, but it is one hard not to make as managing director Robb Wilmot and chairman Michael Edwardes try to steer the company through the problems created by the firm's piebald heritage.

ICL, armed with the mainstays of its line, the 2966 and ME29, which are both getting rather long in the tooth, is facing competitors who are increasingly aggressive over price and – even more – over performance.

Computer Weekly **examines how ICL is facing up to the challenge and preparing itself for the future**

The gift horse looks for gifts for itself in 1986

ICL

Wilmot will have to soldier on with the attitudes he inherited

SIGNIFICANCE for ICL of the gap between now and the time when the 2900 architecture is re-implemented in the DMI and the Estriel is growing as the competition increases.

The two new machines, the DMI due in 1984, and the Estriel due in 1985, are not only an attempt to revitalise ICL's mainframe position, which is still 70% of the company's sales, but are also aimed at making up for another of the defects of history – the failure to provide for some form of IBM compatibility at an earlier stage in the company's evolution.

Wilmot does not intend to create IBM compatible hardware for ICL, but will offer embedded interfaces which will allow IBM application software to run on ICL machines, and which will allow ICL software to be accessed by IBM systems.

This strategy equates perfectly with Wilmot's declared aim of surrounding the IBM user, rather than going for IBM's customers head-on in the CPU marketplace.

On the other hand, Wilmot has steered ICL into direct competition with IBM in its most profitable and sensitive area: the top end of the mainframe business.

Looking to 1987, it is possible to detect a scenario, directly from what Wilmot has said, which implies that ICL will be back in the big machine business.

For the years 1985 to 1989 Wilmot has spoken of levels of mips (machine instructions per second) admittedly for multiprocessor machines, which are top-end mainframe mips levels.

Assuming this reading of Wilmot's strategy is correct, it follows that an easy and low-cost option on keeping a slot in the mainframe business open until he can achieve this strategy, is attractive.

Fujitsu, for reasons which may be very different from those so far publicly declared, was able to offer Wilmot just that option in the form of the top-end Facom 380 IBM compatible machines.

Time will tell whether the gamble Wilmot is taking in introducing Fujitsu to the UK and European market will not rebound on him.

When it found ICL, Fujitsu had been looking around for another marketing partner besides Siemens for some time, preferably one on the English side of the language barrier.

If ICL was a gift horse itself looking for gifts, then Wilmot may have seen Fujitsu in exactly the same light.

Fujitsu was facing a mainframe future without access to the design genius of Dr Gene Amdahl following his departure from Amdahl Corporation, and ICL still has enough hardware design talent, both on board and contracted, to make up for Fujitsu's self-perceived deficiencies.

Not only that, ICL possessed and still possesses systems software design talent of world stature.

What ICL lacked two years ago was the money to go on paying this talent, or more importantly, to go on building the designs they came up with.

For probably two years or more to come, Wilmot will have no way to put ICL back in the top-end mainframe business. But Fujitsu has.

When Wilmot has ICL back on the road in 1986 – which is when the big pay-off will come if it is ever to arrive – it will be no surprise to find that Fujitsu, while still ICL's main hardware system builder, is also moving out to market its mainframes on its own.

Prior to paradise in 1986, however, must come purgatory in 1984 and 1985. That, at any rate, is how the analysts in London, who stand guard over the £100 million of institutional money which saved ICL from the wolves two years ago, see it.

Liz Sharpe, the computer industry analyst at Wood Mackenzie, says 1983/84 will see the first real test of ICL in the marketplace as it takes its first clear shot at selling its new products and strategies in the world marketplace.

If this sounds an odd way to position the "test hurdle" for ICL, Sharpe fairly conclusively shows that, so far, Wilmot and outgoing chairman Sir Christopher Laidlaw, have done no more than a conventional company turnround, primarily financial.

When they took over in 1981 the two new executives simply stripped out the overheads which had driven the company into a total loss of £145 million in 1980 and 1981.

So far, they have had to ride a horse principally gifted from the past while they try and nurture

ICL still possesses systems software design talent of world stature

their own steeplechaser into existence.

For analysts like Sharp almost to dismiss the past two years may seem unfair, but it is necessary, because the Wilmot strategy for a resumption of real growth at ICL remains untested.

That strategy rests on turning the company into a network product supplier. This is fairly new concept, even in the US, and a total conceptual revolution for the middle and senior management that Wilmot inherited and still has to work with at ICL.

In the past the senior systems management at ICL saw both itself and the company as a mainframe supplier, with unavoidable involvement in certain kinds of software support needed to ensure that the mainframes were viable, running entities.

Fortunately, for all the contumely heaped on their heads, some of the product planners in the old ICL went down in hardware terms as far as the DRS, which is proving one of the current successes for ICL, and sideways into Dataskil and software.

Dataskil was one of the few pieces of evidence, prior to Wilmot, that anyone at ICL understood the way the world was moving towards software and away from hardware.

Unfortunately, in the years up to 1981, Dataskil not only suffered from political isolation within the company, but from decreasing financial success as well.

Wilmot eliminated Dataskil and took what was worthwhile into the mainstream of the company itself.

There were two reasons for this. First was the all too enormous software effort required to create the products for the new Wilmot strategy.

The second was to impose some kind of rationalisation on the software products being developed by the company.

Between the Group Information Services of ICL itself, and Dataskil and other groups within the company prior to 1980, as many as four or six separate projects, each designed to create the same piece of application software, were underway, few if any with a real eye to a saleable software product.

Wilmot has brought a degree of rationalisation to this, though he has seldom been credited for it.

Few have understood how little room he had between outright redundancy for the staff of Dataskil itself, and retaining what he clearly perceived was a valuable, if misapplied talent.

There has been little public display so far of just how this rationalisation has worked, and there is little likelihood that there will be anything spectacular this side of Christmas.

Most of ICL's software talent is involved in getting the systems and communications software operable for the network products line. Little of it is involved in application software, though Omac, the manufacturing system, has had its successes recently.

Most of the application software will come from the systems and software houses with which Wilmot has forged new links, most of them working reasonably well so far.

But all the change so far wrought has been achieved by edict.

ICL remains a company suffering from the chronic indigestion of three different mergers which left it with a surfeit of middle managers talented at political survival and little else.

The precise distinction between a company which is badly led from director level, as Ferranti was prior to its rescue, and a company which is both badly led and badly managed from the middle, as ICL was, is one that is very easy to illustrate.

Ferranti went down financially, but has continued to its current success with the same products and management as it had prior to collapse.

ICL went down financially, and has now been exposed as naked of a series of key strategic products at a time when the competition is filling the gap at ever-increasing speed.

That kind of problem surfaces when there are major managerial defects below board level.

A little over a year ago Wilmot was asked by an employee shareholder at one of the extraordinary general meetings what he had done about the bureaucracy within the company, which he had promised to reform.

With a gimlet-eyed stare and an attack of bluntness for which he will be long remembered he uttered one clear word: "Nothing."

Even from the outside it is clear that Wilmot is leaning ever more successfully on this recalcitrant wedge in the middle, but he is still a long way from success.

"There is only so much talent in the world," as management guru Peter Drucker once observed, "and that's all been used up."

In the world of computer companies the need for real talent is high, but the chances of obtaining more than a percentage of it are low.

Wilmot will have to soldier for a good while yet with the attitudes and men and women he inherited, many of whom remain in disagreement with his policies, giving only nominal consent to his strategies.

This raises the spectre of communications, both within the company and without.

The share price is one key indicator of the success or otherwise of just how a company communicates with the world, and more specifically with its shareholders and bankers.

DEC has gone through four quarters of profit decline, with minimal attrition to its share price – which is close to the same level prior to the profit erosion.

This is thanks to intense and talented communications from the company to its shareholders.

ICL must be about the most strongly tipped "buy" in the London stock market for the past year by brokers, yet the share price stubbornly refuses to budge over the 50/70p level it reached after the company raised £100 million in the marketplace.

Most analysts have a fairly simple explanation, which will be fully tested if ICL brings off the £50 to £60 million profit and £800 million-plus sales the same analysts are forecasting for this year.

According to the analysts the company has simply ceased to bother to provide enough information of a routine nature to both the Press and the City to substantiate the optimistic predictions of the analysts.

Bearded with those complaints, Wilmot has merely grumbled that he has to run the company.

This inward looking stance, which thoroughly disposes of criticisms that what Wilmot began by managing was not the company but public opinion, is also clearly true.

Wilmot has often shown irritation at being singled out as the sole possible saviour or manager for ICL.

He has made several attempts to generate a team approach, both in public and private, but this has not worked out so far, and the current advertising campaign, launched with great pzzazz earlier this year, is looking dangerously like IBM fires the big waterlogged as IBM fires the big shots in some screed or magazine every day.

In support of his team strategy Wilmot stepped back to give the limelight to others, but this is proving an expensive mistake in terms of the company's credibility.

No prominent spokesman or alternative to Wilmot has appeared, due partly to internal politics and partly to those who do stand up in public.

This, like much else in the fortunes of the company, is likely to change soon.

WILMOT (left) and EDWARDES . . . Steering ICL through the problems of its piebald heritage.

ICL

COMPANY PROFILE

ICL users are a humourless lot, according to the user group chairman-designate, John Atkin. He got no response at all to a light-hearted invitation to compose Robbograms for the group's magazine, *User News*.

Robbograms are the slips of yellow paper that managing director Robb Wilmot uses to communicate with his colleagues.

ICL users it seems, as Margaret Park discovers, have rather more serious matters on their minds

Users grow serious

Dixons was lured to ICL by up-to-date hardware.

IN the last available *User News*, out in May, ICL didn't score at all highly in a survey about customer satisfaction with reliability and service.

Out of 30 questions ICL achieved ratings of only average or below on 23 of them. And the highest mark of seven went to the company's service desk staff who, although able to do everything from the servicing itself, are apparently like boy scouts – polite and helpful at all times.

But on more crucial matters – ICL's invoicing procedures and software distribution from the Reading centre, for example – users gave ICL a low rating.

David Stewart, DP manager at Manchester City Magistrates' Court, who analysed the survey results, said: "The users who participated in the survey are not being supported in anything like the style required, with several sites reportedly moving to other manufacturers because of problems."

Surveys of this sort always elicit most response from users who have grievances, but figures that show equipment out of order for 30-90 days or longer, because of delays on component supplies, mean that ICL has some improvements to make.

Few users will admit to discontent if required to reveal their names for fear of being labelled trouble-makers.

Most users, however, pick ICL for a reason and stick with the company, because it provides the systems needed for the job.

Cheshire Building Society for example, an ICL user since 1979 (when it switched from NCR), was lured by attractive proposals from ICL that included the Cheshire becoming a reference site for ICL's new building society software.

According to the Cheshire's data processing manager, David Anstey, the initial switch to ICL was brought about by a need to move from a pure batch operation to an on-line system.

"ICL had a building society package which it called the Cheshire System, after us," said Anstey, "but ICL's involvement in it ended in 1981 and we've carried on developing it since then as our own product."

The Building Society procured itself a profitable interchange from the joint development of the Cheshire system. Other building societies visited the Cheshire to see the system up and running and ICL paid it royalties on software sold as a result.

The Cheshire's first purchase from ICL was a 2904 and since then the company has upgraded through a 2946 to a 2955.

Anstey says the Cheshire will be upgrading again in a few years' time, and plans to stick with ICL.

"We've had very good support from ICL," he said, "particularly as a reference site. There have been a few problems with the hardware, but none with the manufacturer's software."

The bookseller and stationer, W. H. Smith, is a big ICL user with dual 2976s, a 2966 and three 2904s at its Swindon site, dealing with the retail business, distribution and W. H. Smith Bookclub.

Martin Cutler, Smith's computer development manager, whose responsibility is to recommend new machines, says the company is "by and large satisfied" with ICL.

"Once you have a mainframe," said Cutler, "it's difficult to change to another manufacturer because of the expense."

The company is upgrading its dual 2976s to dual 2988s and moving from the George III operating system to VME. Seventy of Smith's 240 staff are working on applications software.

The one fault that Cutler can pick with ICL is its lack of applications software, a deficiency he puts down to the fact that, compared with IBM and the plug compatibles, ICL has fewer machines installed worldwide.

"For this reason," said Cutler, "third party software suppliers don't offer their wares to ICL – they are more likely to sell to bigger companies like IBM."

Dixons Photographic, the 260-shop chain that has expanded from camera equipment to sell hi-fi and now computers, has been with ICL for four years. It upgraded from a 2960 to a 2966 a year ago due to business expansion.

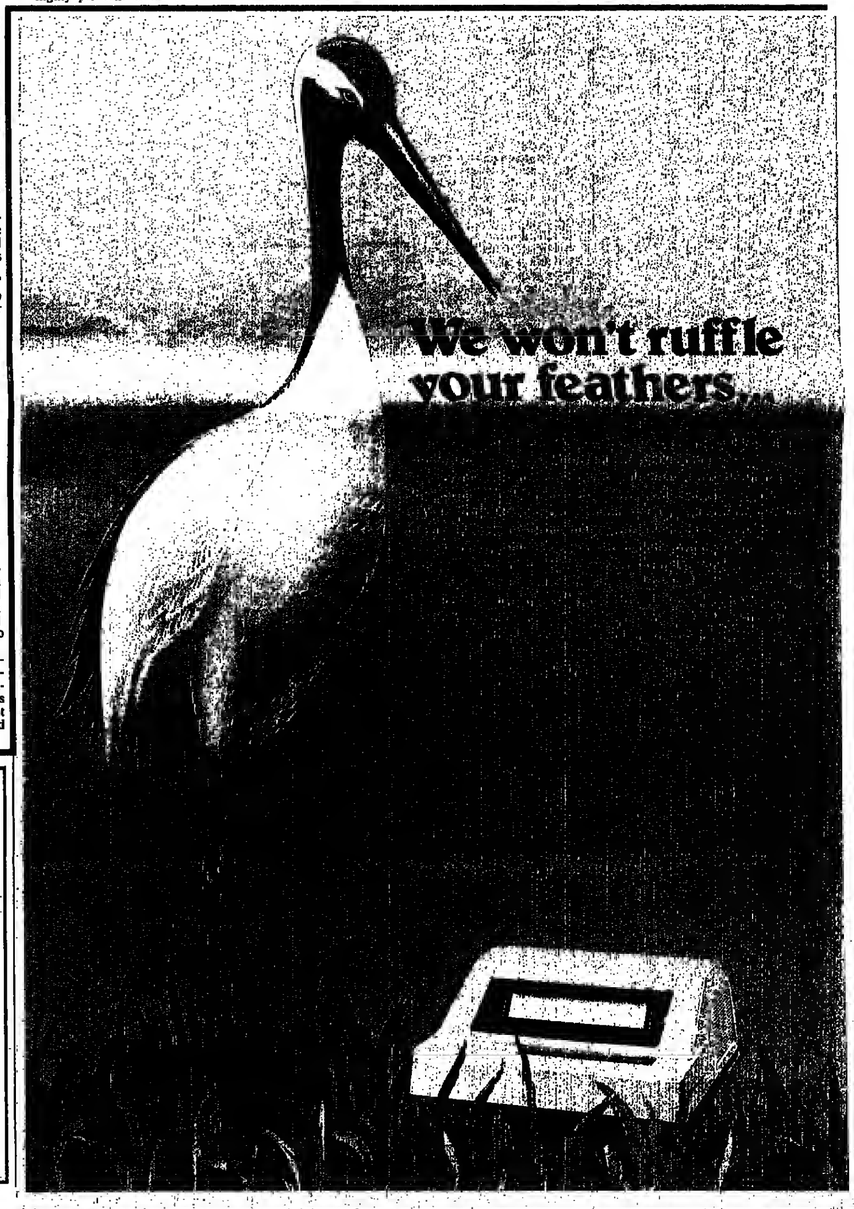
Terry Sebooling, deputy manager for Dixons' management information services, said the company transferred its affections from Sperry to ICL because "it offered a good deal on prices and the hardware was up to date".

Dixons also has three 1503 minis connected to ICL's 9500 point-of-sale terminals in every shop.

John Atkin, chairman designate of the ICL User Group, said ICL's strong points included its open stance and the loyalty of its customer base.

"Eighty per cent of the company's business comes from repeat sales, and I'd say this was a slightly higher rate of loyalty than can be claimed by other manufacturers."

Patriotism also plays a part, Atkin explained: "This issue is more pertinent these days than in the past. The feeling now is that users are better off with the local lads."



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COMPANY PROFILE

ICL

Is ICL's TraderPoint marketing scheme designed to sell more hardware?

Or is it designed to get more software written for its range of computers?

Paul Walton talks to Ray Piggott, who has been director of the scheme for nine months, and finds out he has just delivered some changes, but no surprises during that period.

Selling the solution — not just the box

PIGGOTT . . . "I think we ought to educate our salesmen, not sack them."

DIRECTOR of TraderPoint Ray Piggott believes that hardware and software should not be sold totally separately. "You have to recognise that every supplier is now trying to bring these two things together.

"There is some tension when you bring together software and systems houses with ICL, with the salesforce and with the customers. But it is *the* way to sell solutions," Piggott said.

TraderPoint's commercial terms have been fine-tuned of late to make it easier, and in some cases just possible for the systems and software houses to make a profit from the scheme.

Piggott outlined how he would like to see more wholehearted marketing of systems, in which the third parties "add value" to a much greater extent than at present.

"The TraderPoint dealers bring in experience and expertise to augment our own, doing things which we could not, or could not afford to do. This is the way they add value," Piggott elaborated.

Piggott has good experience, as he was for many years a sales director at the OEM supplier par excellence, Data General.

Piggott quipped that perhaps ICL would be putting wheels on the corners of its computers, now that Sir Michael Edwardes was to be in charge after steering BL back to recovery.

But the new chairman has a far more difficult task with ICL.

Getting systems out of the factory faster is not the answer to an ICL recovery, as Piggott obviously knows: far more applications software packages are needed to fuel the rise in sales, especially to new markets for smaller systems.

ICL is the only vendor which has stuck firm to its third party sales scheme, which is two years old this month. Piggott claimed that it would now try to go beyond the OEM-type marketing deal, to involve systems and software houses to a greater extent than DEC or Data General ever did.

As the TraderPoint options proliferate, with ICL throwing open its entire range, in principle, for dealer sale, problems begin to appear on the horizon.

Not the least of these is how to control those third parties who simply want to be middlemen, taking a profit but adding nothing.

There are now 500 TraderPoint dealers and over 120 in Britain. With these figures set to double by 1984, if Piggott's hopes are realised, then many will be selling ICL equipment for the first time.

Under the scheme ICL or the third party could have final responsibility for making the actual sale and for providing back-up and support. The dealer could in theory be selling a very expensive 2900 mainframe.

Piggott said: "We are conscious that the end user could be making a very big investment and that we can't abdicate our responsibilities. What we are doing is opening the door a bit wider to those systems and software houses which have expressed an interest.

"The software industry is perfectly capable of handling everything from a micro to a mainframe."

Are there, however, also ways of retaining the integrity of an ICL system? What is to stop a TraderPoint dealer delving into the ICL system software, and coming up with a slightly different plug-compatible machine?

Now the 2900 mainframes, the CAFS intelligent storage and database engine and even the massive Atlas IBM plug-compatible machines are available, isn't there some danger that tension between ICL salesforce and TraderPoint dealers will increase?

Piggott said: "There are no rules or regulations which restrict the activity of TraderPoint dealers. We are both conscious of what is being offered, and I hope we can agree to retain the integrity of the ICL system. We are dealing with a mature industry, after all."

On selection of TraderPoint dealers to market mainframes, Piggott said: "For larger items of equipment the software house will be bringing different, more systems-oriented products. We will have to make the end user aware of that and let him choose."

The leading systems houses, such as Logica, CAP or Software Sciences are most likely to be selling big systems. Piggott said that ICL was taking advantage of its resources and its salesmen, to produce large-scale applications or even entire systems.

For the past six months Piggott has been reviewing the ways TraderPoint might change, both to become a more efficient marketing arm and to take on increasingly a research and development role.

Fine-tuning of TraderPoint has meant that, first of all, it is getting easier for dealers to achieve the 30% discount ceiling, easier to export and easier to work alongside the remainder of ICL.

All these three will help to [illegible] any conflict when ICL and TraderPoint dealers are trying to win the same sale, as the dealer can in theory offer more than ICL itself.

Piggott said there was no conflict in the field, and agreed that Wilmot's edict about ICL sacking any salesman who tries to beat unfairly a TraderPoint dealer to a sale "still stands".

"But, I think we ought to educate our salesmen rather than sack them," he added.

Two new schemes which have just been thrown into the already overflowing TraderPoint pot are what are known as International Aggregate Sales and International Opportunity Matching.

The first allows all subsidiaries of a systems house to deal with ICL in any of the countries in which it operates, cutting down export formalities.

The second sees ICL playing match-maker between two TraderPoint dealers it thinks can sell more by collaborating.

There is also the promise that ICL will set up more machine and, later, industry specific sections within TraderPoint to follow the Business 29 and the just launched Partnership 25 schemes.

Software industry support centres are springing up around ICL

These schemes see ICL's [illegible] perts in the ME29 and now System 25 working closely with several systems and software houses.

ICL admits that such "[illegible] mate" collaboration is needed, [illegible] that in setting discount levels for these machines it had been "over optimistic about the early sales".

There is a respectable amount of systems and applications software for the System Ten/25s and ME29 but it is growing old.

System 25 is by far the most popular large TraderPoint machine, beating the [illegible] workstation by virtue of its systems house following. The ME29 also has its admirers, but they must now begin preparing for its successor, the Distributed Mainframe/1, due out next year.

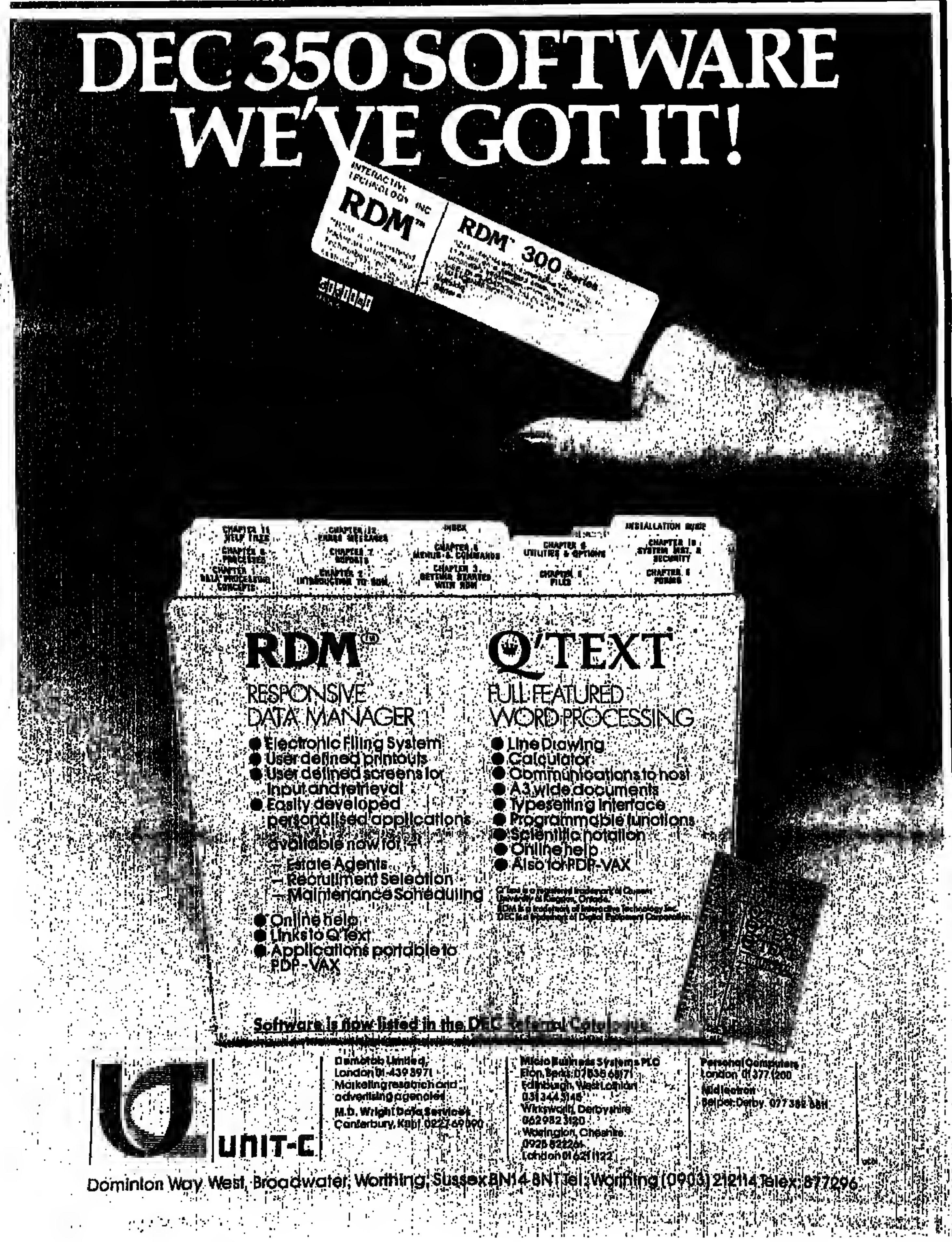
Piggott is now beginning to look at ways in which far more radical changes to TraderPoint might be put into action. There has always been an R&D operation intended to help small TraderPoint dealers to get software up on ICL hardware, but it is growing.

"We would be a good starting point for the development of software on fifth generation systems. We would not collaborate with everybody, being first and foremost a marketing organisation but we could do more."

And he described how, as part of the next review just beginning, into ICL's ComputerPoint retail outlets, selling applications software gathered through TraderPoint was being investigated.

TraderPoint has maintained and is developing the dual role of selling more ICL computers and stimulating the writing of more applications and possibly some systems software.

Piggott calls it the "OEM channel of the future — selling solutions not just boxes".



COMPANY PROFILE

ICL

Many people in the UK computer industry today have worked — or still work — for ICL, and even more have used ICL equipment.

So it is hardly surprising that, almost in spite of itself, ICL retains considerable goodwill, if not affection.

It has reportedly abused this goodwill in the past by complacency, aloofness and bureaucratic attitude. Now, however, ICL is trying hard to persuade systems and software houses to work with it to swell out the applications and systems software so badly needed to keep ICL users from migrating to other manufacturers' equipment.

John Riley examines its success

Systems houses fill the gaps

AS the financial cuts bite increasingly deeply into DP departments, there is a rapidly expanding need for more efficient and user friendly environments, and a corresponding increased need for efficient systems software.

ICL's main thrust must always be towards the future, so it makes sense to encourage third parties to provide an easier working environment on demand from users. An important index of the health of the company is the number of companies clustered around and working with it.

The choice ICL has faced is stark: either to encourage systems houses to produce pertinent software and help market it, or to see a continuation of the drift of ICL users away from the company.

Bernard Panton, managing director of Telecomputing, one of the leading ICL systems houses, said: "Like IBM, ICL must provide its own software, but it cannot harm ICL to have two or more horses in the race for survival."

Sid Gresham, managing director of another ICL systems house, Gresham Computer Services, said: "ICL now realises that if we produce a product that enhances its product, it does not result in ICL losing out, but rather it polishes the ICL product so that there is something for both of us."

The problem now facing ICL is not whether to collaborate with systems houses: that decision has already been taken. The question is with whom and at what stage should it collaborate? There are dangers that it might not be looking for tomorrow's software stars early enough, compared with quick-off-the-mark US companies.

There are plenty of weak areas in ICL's systems. These include teleprocessing, productivity aids, database reorganisation, enquiry aids, decision support systems, and so on. "There are still plenty of gaps to be plugged," said Green, "so we're pleased that ICL leaves things for us. The raw material is good, although complex to run for the ordinary user."

A significant gap in ICL's systems software has been teleprocessing monitors. Oxford-based Telecomputing has successfully exploited this failing with its teleprocessing monitor, TPS. The system allows TP systems to be written with less coding than the ICL equivalent. Panton had expected to sell a dozen systems, but ended up selling 400.

After stormy bouts of litigation, Telecomputing has finally come of age in ICL's eyes and gained a collaborative agreement this summer. "The agreement recognises it's desirable that current and future versions of TPS should remain compatible with ICL's future equipment and software," said Panton.

Gresham has also plugged that same gap. "We build a superstructure on top of ICL's basic bottom level teleprocessing handler, whereas Telecomputing started all over again from the beginning," said Green, explaining the difference between Telecomputing's TPS and his own TP2900.

Small companies are enhancing and streamlining ICL products

"ICL's company philosophy — it gives you plenty of tools and things that you can do and makes you do it yourself — pervades every product line, and this is no exception, as ICL does provide the basic handling," he added. "So instead of giving you a Fairisle sweater, ICL gives you 200 balls of wool, and we do the knitting. In Telecomputing's case it has spun its own wool."

Another area covered by Gresham is that of modifying database information. "ICL's DataDisplay provides a facility to display information from a database, but there is no way of modifying it," explained Green. "So if you have, for example, 20 records with the wrong date parameter, you have to retrieve them all to change the date and then rewrite.

"Our package Alterdata updates, stores records, produces printed reports and reformats numerical fields all in one utility."

Green points to other gaps: "In IDMS, ICL's brown data management system, the re-organisation of large databases is a problem. Not only is there a need for reorganising software but also for a re-organising service — like a fire brigade. ICL doesn't have relational database on VME equipment and another weakness is security — not that systems are insecure, but that you have to do it all yourself, and need a high level of skill to set up a good security system."

There are many other holes to be filled: for example, the one man Wokingham-based CHC Software Marketing, run by Charles Coultas, offers library services, with programs for re-organising disc, data and source files, with several other facilities.

Dorset County Council Computer Centre also saw the need for general purpose enquiry packages aimed at user departments' screen formats to interrogate files on the ICL 2900 series under VME and provide speedy one-off reports.

Manchester-based systems company Ramphurst specialises in running performance packages for OMAC29, the ICL manufacturing system designed to run on ME29s and 2900s, and also offers to reorganise customers' database to OMAC29 protocol.

These companies are small, but all are enhancing and streamlining ICL products, which can only reflect well on the company. "ICL has to get people to develop systems software," said Panton. "But that takes agreement, as software costs a lot to develop. So to produce, say, a relational database would take some sort of agreement about non-competition. That would also have to ensure that the technical people would allow information to flow freely."

Not all systems houses have enjoyed easy co-operation with ICL. Aston-based Tradewinner Systems, a Honeywell system builder, has started to produce productivity aids for ICL users.

"We have 1,600 programs that could be converted to TME/VME, but we've found that, being in the regions, it's difficult to build up a relationship with ICL on a national level," said managing director John Wood.

"ICL is sitting back waiting for the dealers to develop products, but the dealers haven't the money to do so. We are prepared to invest pound for pound up to half a million of our own cash if only ICL can offer us equivalent support and commitment.

"If ICL doesn't remedy the situation it will remain the 'nearly' company."

PANTON . . . "It cannot hurt ICL to have two or more horses in the race."

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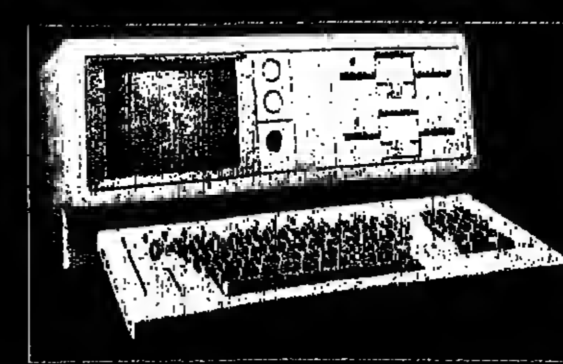

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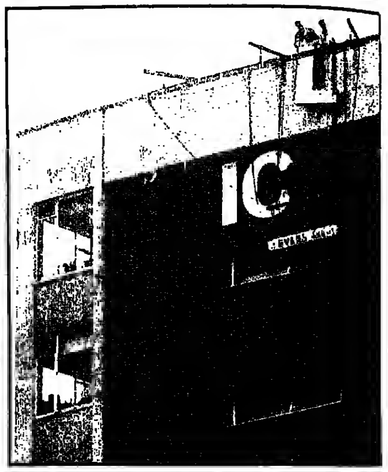
COMPANY PROFILE

ICL

Fighting alongside personal computers

Not often is a major mainframe manufacturer happy to go on record as feeling positive about plug-compatible manufacturers (PCMs) jumping into its market. But that is now the position with ICL.

The changes forced on the company by both the developments in the marketplace and the ravages of economic fortune have left it facing in a new direction that has, as a part of the horizon, an accepted and acknowledged role for the PCM, writes Martin Banks



ICL's final initial is put in place after the ICT/English Electric merger.

THE view ICL has of PCMs is now different from that normally accepted by the mainframe industry.

Instead of seeing them as direct rivals offering a cheaper, faster or higher performance processor that conveniently makes use of the expensive software development made by the prime manufacturer, ICL now takes the more benign view of the company that has the overall product strategy, to which the PCMs are able – indeed in some circumstances encouraged – to add specific value for the end-user's benefit.

That, at least, is the theory. And it is one that stems from the historical development of the company, particularly over the last two to three years. The company's history as the UK's only mainframe manufacturer is well known and hardly worth repeating, except to say that through its strength in certain well-defined marketplaces, such as health and public administration, it had managed to maintain a healthy profit and loss account through several peaks and troughs in national economic fortunes.

Its original hardware, from the merger of ICT and English Electric, gave the company a sound base to work from, and even if it was not too quick in getting a new range to market when it arrived, the 2900 series won many new fans for the company.

The late Seventies and early Eighties saw a change in the company's fortunes, however. The marketplace re-oriented itself in a marked and continuous fashion away from reliance on the large, centralised mainframe/minicomputer structure (where the main criteria for choice between the two were estimations of throughput) and towards something different. This was the dissemination of computing power through a user installation, so that the power rested with the actual user, rather than the centralised control of a user DP department.

The age of the personal computer had arrived and had caught ICL, in common with other mainframe manufacturers, somewhat by surprise.

This change in the traditional market base for the company coincided with a major economic recession. ICL had managed to ignore previous examples of this pernicious breed, but this one caught it amidships with a full broadside.

The company nearly sank.

From that situation came the new management for the company under Robb Wilmot, and a new product direction. As an ex-

The PCM is accepted as at least a necessary evil

semiconductor industry man, Wilmot had a wider perspective on the overall marketplace potential than could be gained from the relatively narrow view in a mainframe computer house.

Since taking over, he has set about exploiting that perspective for all it is worth.

The company is now emerging with a radically different approach to the marketplace – one that incorporates acceptance of the PCM as, at the least a necessary evil, and at best an essential aid in converting sales prospect into customers.

From one point of view this change in attitude has been achieved by the simple, semantic expedient of moving where the compatible "plug" should actually be.

Wilmot's wider perspective led him to see that the personal computer would not go away, and that ICL should be in there fighting with this trend, rather than against it. The personal computer, in all its various guises, could be an add-on of inestimable value to the existing and future large systems product line, if the two could be made in some way compatible with each other.

This essentially simple theory has since become the major plank in the ICL product strategy for the future, for from it has come that semantic shift in the position of the compatible "plug".

That strategy is now called the Networked Product Line by ICL, and it stems from Wilmot's perception that standalone products, be they mainframe, mini or dinky desk-top micros, are now a passing breed. The real strength of computing is now firmly seen as being in the realms of communicating systems.

To achieve that, of course, means the imposition of some degree of standardisation so that the various elements in a communicating environment can actually do that small thing – communicate.

ICL is one of 20 signatories to the ECMA (European Communications Management Association) Local Area Network Standard which has established a common approach in one major area of communications, and it is at this level that the new compatibility "plug" now exists.

To make this theory work in practice – and to make it work in a feasible timescale – meant that the company had to look outside itself for support for its own development efforts and capabilities.

It is acquiring advanced technology in both systems and hardware design from its collaborative efforts with the Japanese company, Fujitsu. This has provided the company with much needed support in an essential part of its overall product strategy, namely maintaining and advancing its existing position in the mainframe computer marketplace.

At the other end of the scale, it has plugged the major gaps in its old product line for intelligent workstations and personal computer systems with its collaborative efforts with Perq and with Bull.

Another collaboration has been with the Canadian manufacturer of PABX equipment, Mitel. Having PABX facilities available is an essential element in ICL's product strategy, for such switching technology is fundamental to making complex communications networks operate effectively.

All this collaborative effort left ICL's own development teams to concentrate on the middle section of the company's product line, the distributed processing area now addressed by DRS.

No longer is the company just selling megabuck mainframes to megabuck corporations and institutions; now the market is made up of smaller customers with smaller budgets.

With a product line now closely oriented towards an internationally agreed standard, in the ECMA LAN agreement, ICL feels it has positioned itself to meet the future needs of the marketplace. An integral feature of this, of course, is that other manufacturers will adopt that same policy, either in whole or in part, and will inevitably be plug-compatible manufacturers and competitors – each to the other.

It cannot be avoided, for now compatability between products, local networks and, ultimately, international networks will be the key determinant of success. The PCM has become an essential ingredient in the mix.

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COMPANY PROFILE

ICL

Often hidden amid ICL's now rationalised product line lie a few systems of which the company is justifiably proud, but which have perhaps been the victims of some bad ICL luck.

CAFS, an intelligent storage and retrieval device, falls into this category.

It was introduced in 1979 after hard research and development by a team at Stevenage. And it continues to be one of the stars of ICL's show despite a rather disappointing reception from the public.

Hamish Carmichael is the marketing manager at ICL for CAFS. He describes the system as eimilar to the computer we all want and need, but which only the likes of Doctor Who actually possesses.

He talks here to Judith Morris

CARMICHAEL . . . "It is now clear that this invention is a sure winner."

A system that acts like a human brain

CAFS' claim to fame is that it is a "highly specialised searching engine", which can provide answers to questions that users normally would not even ask, because they think the system incapable of answering them. It actually performs its tasks of retrieval more like the human brain than the computer – at incredible response rates.

Hamish Carmichael says that most commercial, or indeed any, data processing departments face the same standard problems. They include a load of outstanding systems development requirements, tactical and maintenance work which takes up an increasing proportion of development resources and the continuing and rising costs of staff.

"All DP departments are involved in searching," he explained. "CAFS can make the skilled recourse available for applications which require them, and throw simple applications together for the end user."

ICL has actually used two CAFS systems for some years in its personnel department. The company claims that it used to employ three analyst/programmers who did nothing but generate ad hoc reporting suites for personnel management. The live CAFS service, although only originally available for six hours a week, cut the demand for these ad hocs down to almost nothing, so that the three staff could be redeployed.

When CAFS was first introduced in 1979, it ran under DME and the George III operating system on 1900 and 2900 systems. It used a disc controller and special discs and data formats, and cost about £200,000. CAFS 800, as it was known, was not an overnight success.

Although there were some versions installed – notably at Hull, which operates the UK's only independent telephone service with 125,000 subscribers. CAFS was turned down by British Telecom earlier this year in favour of an American made STC system. Both the BT and the Hull orders were for directory inquiries systems. CAFS, with extremely high response times, was eminently suitable.

Witnesses at the demonstration of CAFS ICL gave for BT said that it was "quite amazing".

Nevertheless, ICL lost the order to BT because of the obsolescence of the system – obsolescence which many critics have said was virtually built in. Even in 1979, when CAFS 800 was launched, George III was redundant although still in use in many ICL installations in the country.

Now there are "hardly any" users of CAFS 800.

It is about to be replaced by a much smaller, more compact version to be known as CAFS ISP, which was announced last year and should commence deliveries in November of this year. At the moment, it is being field tested at 20 sites and Hamish Carmichael claims to be overjoyed with the success it has had.

CAFS-ISP differs from the previous models in that it slots quite happily into any 2900 mainframe running under VME. It uses standard disc controllers, standard discs, files and databases and costs a relatively low £30,000.

This time ICL reckons to have got it right. The system was on show at the recent Sicob exhibition in Paris where it was widely admired, and export orders have been received from South Africa, Holland and other countries.

Hamish Carmichael claims that although the new version of CAFS is doing well, earlier problems were bound to arise because: "People don't look at a total system cost. They look at hardware and software costs. CAFS is actually like buying six years' manpower. At £30,000, that is very cheap."

But the key feature of CAFS is the sheer speed with which CAFS hardware can perform search and selection functions, and this speed can be exploited to provide simplification and increased flexibility in the users' systems.

"These ideas are very popular with end users," said Carmichael. "They contrast very favourably with the received opinion of data processing by traditional methods as rigid, unresponsive, difficult and hard to change."

Internally the CAFS hardware operates at about 3.6 megabytes a second. The throughput delivered to the end user depends on the speed of the disc in use, the amount of software and other considerations.

CAFS actually acts as a highly efficient filter, extracting relevant information from large volumes of data held on disc. Requirements are received and validated by superstructure software in the mainframe. Those elements of the requirement which involve searching through stored data are codified by a CAFS code generator which forms part of the VME operating environment and the result in the form of microcode is passed out to the CAFS-ISP hardware.

The design of the system and the tasks it can complete are faultless

Three main functions are performed in the hardware – formatting interpretation and control, searching and retrieval. For layers of technical detail, to manage these functions elements of task are set up in the logical format unit, the key channels and the search evaluation unit, and in the retrieval unit and the retrieval processor. When these have been established, the transfer of data from the disc is initiated.

The design of the system and the tasks it can complete are faultless, so why has CAFS not enjoyed a happier response from the public? The answer was that it was a marketing gaffe committed by the old ICL management before Robb Wilmot came along. So far he has been unable to salvage it. An alternative answer is that it is simply an expensive and not altogether immediately necessary product. CAFS was both before its time and after it.

It is hardly surprising that British Telecom turned down what was obviously a marvellous invention – and one which ICL claims has no direct rival, at least not in hardware terms – but running on impractical equipment.

Despite its shortcomings, Hamish Carmichael insists that there is still a place for CAFS.

"It is running on the 2900 range, which is still ICL's shop window range of mainframes.

"The potential for the exploitation of CAFS is very wide," he continued. "The messages are being confirmed increasingly by application experience. These have now been adequate time to prove that additional power, reduced complexity and better flexibility can not only be achieved, but that they can be accompanied by reduction in time and cost.

"Notwithstanding the traditional British attitude of caution towards innovation, it is now clear that this British invention is a sure winner, and in consequence, ICL is planning its incorporation as an automatic component into its standard hardware and data management product ranges."

Judith Morris is editor of Computer Talk.

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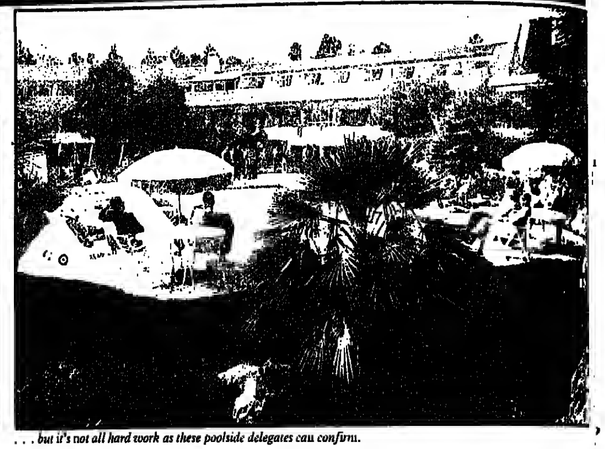


. . . but it's not all hard work as these poolside delegates can confirm.

Top people can get away from it all— and into computers

Seminar centres run by the big manufacturers are now a part of the European scene . . . John Kavanagh looks at the Sperry centre near Nice.

THERE is a lot more in selling a computer than persuading the data processing manager that this or that system is just what his organisation needs for its office automation strategy, or to control production.

That is the easy part, for the computing professional knows the salesman and probably his latest products.

The difficult part is convincing the person who signs the cheque: the managing director or chairman. He is asked to commit a sum with several zeroes on the end when he probably knows little about the proposed system and its implications and is barely aware of the existence of the supplier. His main interest, after all, is oil or engineering or insurance. He is not likely to have much time for a computer salesman.

Some computer companies now find the answer is to bring such senior people together for seminars, usually led by respected world experts in their own industries. The aim is not to bore them with lectures on technology or products, but to talk about the opportunities and implications of computing in those industries.

Many computer suppliers run such seminars at their own centres or in hotels across Europe.

Sperry is an interesting case because not only has it been running seminars longer than most companies — and at its own centre — but has also had to work harder than many of its competitors in Europe to get its name known.

Ted Jones is the director of Sperry's International Management Centre near the fortified town of Saint Paul-de-Vence, a tourist spot inland from Nice.

He explains this problem which makes the centre especially important to Sperry: "When we opened our first centre in the mid-Sixties everyone knew of IBM, if only because of its typewriters." In the UK, Germany, Italy and elsewhere they had probably also heard of their national computer companies. We were a pioneer in the industry, and now one of the biggest computer manufacturers in the world, but we were not well known at chairman and managing director level.

"When such people can come and hear speakers they respect from their own industry, and talk informally on the topic to others at their level, they go back to their organisations in the firm knowledge that Sperry is committed to meeting the needs of their industry. They also enjoy the stimulation of meeting speakers and fellow guests in a relaxed atmosphere. In their normal working environment they seldom get an opportunity for this type of discussion."

This view that seminars away-from-it-all are stimulating and relaxing at the same time is borne out by guests. At a recent fully-booked seminar on office automation at Sperry's centre, several top executives said they had been given new ideas on the topic just as their organisations were thinking about their strategies.

JONES . . . "We encourage everyone to participate."

One senior finance director from Italy said the speakers were better than many he had paid to hear at conferences run by supposedly independent companies.

And an executive from near the top of a Netherlands public utility summed up the value of the seminars to visitors: "It is easy to become introspective when you work at one place all the time. A seminar like this gives you new ideas.

"The size is right; you can get to talk to most people informally; and that is important. You can exchange ideas and experiences and see if others agree with the direction you are taking."

The centre itself provides the relaxed atmosphere. It was planned as a luxury hotel — and so it is. It is totally secluded. The 47 double bedrooms, arranged on three tiers and each with its own bathroom and balcony, all look over the grounds, complete with swimming pool and tennis court. There is a sauna and an exercise room with a variety of apparatus. A hotel and restaurant staff of 21 provide top-quality cuisine and service.

One feature missing from the bedrooms is a television set. As Jones says: "We don't want people sitting in their rooms but talking to each other at the pool or over a drink. We encourage everyone to participate the whole time and generally people welcome this. Very few choose to go out in the evenings, even though we're so close to Nice."

The seminar side is run by 11 staff who between them speak a dozen languages fluently. The seminar facilities match the luxury of the centre. The main auditorium seats up to 60, with headsets at each place for interpretation to and from the centre's "official" language for international seminars — English — plus a fully-equipped sound and projection room.

Sperry has been there since 1977, when it found it was outgrowing a smaller centre in Rome. It started in Rome in 1968.

Jones cuts dead any suggestion that people are sent to enjoy the centre's seminars and facilities as a subtle form of inducement.

"Absolutely not," he says. "We discourage Sperry marketing staff in the various countries from sending the technical people responsible for making purchasing recommendations, nor do we allow the centre to be used as a way of thanking someone for an order. A salesman who is doing his job properly should be dealing with professional data processing people on a day-to-day basis.

"Our aim is to introduce very senior people to the potential of computing in their industry and to draw attention to the fact that Sperry is involved in that industry."

This point is enlarged on by Henri Semarne, one of the centre's two seminar managers. "Sometimes a salesman asks us to take special care of a particular individual," he says. "Our reply is that we take special care of everyone."

Semarne also emphasises the importance of having impartial speakers.

"The centre must stay neutral to keep its credibility," he says. "We don't want speakers to come along and simply praise Sperry. We had to stop inviting one customer who came to share his experiences in a particular industry. He was such a genuine Sperry fan that it became embarrassing for us. We are happy

We don't want speakers to come along and simply praise Sperry. We had to stop inviting one customer. He was such a genuine Sperry fan that it became embarrassing for us

that guests raise questions and sometimes criticisms on Sperry."

This confidence is reflected in the fact that usually up to two-thirds of the guests come from prospective customers to mingle with existing users.

This approach seems to pay off, sometimes only years later or in indirect ways. Most of the European subsidiaries have lists of orders which the centre has played a significant part in winning. The French company says the centre has had a hand in a major portion of its orders.

The centre's impact here is hard to measure. But Jones recalls some

"I'm not saying he bought [illegible] Sperry system because of a visit [illegible] years earlier," says Jones, "but [illegible] certainly went home to him [illegible] those years ago that we are serious about local government."

However difficult it is to measure the centre's impact, Sperry's international subsidiaries are certain of its value to them — for they pay for it. The country subsidiaries are invoiced for the people they send, and last year the centre was 95% booked for its 3 seminars.

As Jones puts it: "It costs a lot to send someone here, and I [illegible] Sperry thought for one second that this was not worth doing they would close the centre — and they would be quite right to do so in those circumstances."

Despite the costs, Jones says the centre compares favourably with using external organisers or getting people in the individual companies to run seminars using hotels. The advantages include a captive audience — and from experience willingly captive — full control over the quality of service and facilities, plus a permanent demonstration set-up.

The centre has its own Sperry link office automation system and facilities for demonstrating other products. Links via the French national packet switching network, Transpac, give access to the Sperry computer centres in France and elsewhere.

"The European companies recognise that the seminars enable them to get to know the right people," Jones says. "We are a professional conference organising operation and if we weren't late the companies would have to spend their own time and money finding speakers, arranging accommodation and doing a thousand and one things that come naturally to us. More likely they simply wouldn't run seminars, and the corporation would not get to meet these people."

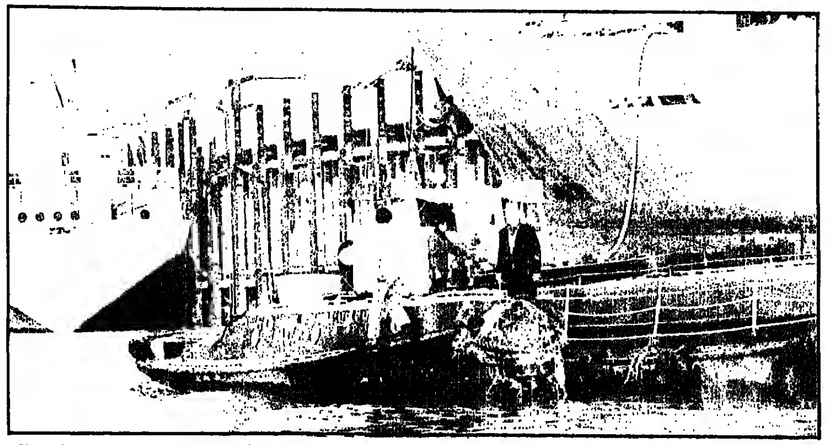
And he adds: "We would also be letting down not only ourselves but also the data processing managers at our customer installations. For by introducing top people as impartial speakers and to other customers we back up the data processing man by getting the computing message home in an informal way which he could never hope to match."

Informal discussion is an important part of the seminars at St Paul-de-Vence.

PORTS

John Riley reports on a Belgium conference which found that European ports are getting communications up-to-date

Full steam ahead for Europort systems



"If ports do not react to information technology they may well become a bottleneck . . . resulting in loss of profits" — EEC report.

MILLIONS of pounds are lost each year because ships are delayed in ports. European ports are particularly hard hit and they face intense competition from elsewhere. The problems are exacerbated by poor internal computer communications which are rudimentary compared, for example, with Japan.

However, as was explained at the two day international conference on sea technology in Belgium the tide is turning.

European ports are exploiting their late entry into computerisation to their advantage. They are submerging their rivalries and planning their computerisation programmes together to ensure that each has a compatible system, so that they can communicate standard information, such as shipping movements, to each other. They hope to score by developing interport as well as internal communication, and in that they already hold the lead.

Urged on by the European Commission, Europe's leading port authorities, as well as its leading shipping companies, have been coordinating a push for a massive open connection system for their data communications. The idea has been proved to work by a European pilot study, concluded last October, and the results of an analysis of requirements for a comprehensive system, embracing a wide range of related administrative areas, will be discussed at the conference.

The European Commission have been faced with recession in the maritime industry since 1975. With little prospect of improvement, and with an increase in protectionist policies by non-European countries, it decided in 1977 to encourage European-wide collaboration among Europe's rival ports and shipping companies, to discuss how they could best pool their resources to introduce new technology, and to improve the efficiency, safety and competitiveness of the ports.

"If ports do not react to information technology by offering a co-ordinating and interfacing role, and by acting as turntables for flow of data exchange, they may well become a bottleneck with a multitude of individually growing systems, resulting in loss of profits", explained the Community's report.

That initiative resulted in the formation in 1979 of the European Ports Data Processing Association (called EVHA after its Dutch acronym). The European Commission gave EVHA grants of about £800,000 as a 50% contribution towards the cost of initiating the pilot study and analysis of requirements.

"The flow of cargo information almost certainly lags behind physical cargo movements, resulting in ship delays in ports," said Bob Vleugels, president of EVHA and general manager of the port of Antwerp. "The chip has to provide the answer to this worldwide problem."

Port administrations have to communicate with a wide range of related organisations, such as customs, immigration, shipping agents and freight forwarders, Lloyd's Shipping Information Services is both the availability and linking of these data bases," said John Hughes, joint chief executive of LSIS. The information is available on magnetic tapes, floppy discs, cassettes and diskettes, and within two years, the service is expected to be available on line.

Communications have been rudimentary in comparison with Japan

The European Commission has also set up a feasibility study to integrate a network of shore-based navigation aid systems (called Cost 301); to set up a programme to coordinate computerisation and collaboration between European customs houses (called Caddia); and it has been involved in other projects connected with oil pollution control and marine environment research.

The largest and most comprehensive shipping database in the world, with which the European programme has close contact, is Lloyd's Shipping Information Services (LSIS), the company through which Lloyd's Register of Shipping and Lloyd's of London Press have jointly marketed their information since 1976.

Lloyd's Shipping Information Services gives each ship a permanent seven digit number when it is ordered from a shipyard, and plots its progress from these. Stored on an IBM 3033N mainframe with eight Mbytes main memory and two Digital Equipment PDP-11/70 minicomputers are details of 74,000 vessels of over 100 tons arranged in five files.

"We must make sure that what we are all doing is compatible"

There is the new construction file with details of the ship's specifications; the register book file, which has a detailed description of the completed ship; the shipping movements file, which currently details 1½ million movements a year for the 30,000 or so ships worldwide in service; the shipowner file, which provides ownership details; and the casualty file, which gives precise details on serious casualties to all ships and all reported incidents, however minor to tankers.

"The punching power of worse to the central computer. It took the port of Copenhagen six months to sort out computer to computer connection, despite Datacentralen, IBM and the Danish PTT all insisting that their equipment and software were running properly.

The ports with computers and microcomputers had more trouble than the five ports using telex, due to the use of the TTY (teletype) communications protocol. The European Commission report says: "While in theory the IBM computers were able to support this, they were unable to provide easy access to the users' software and files."

A further problem was encountered transmitting data internationally over switched public telephone lines, as interrupted calls caused much frustration by breaking connections and wasting time. However, no significant problems were encountered operating the system, and operator error rate was below 10%.

The pilot scheme demonstrated to the EVHA that it is feasible to connect port computer systems, but the organisation now only recommends systems which support a variety of protocols and which are open.

"The pilot project, which was a very simplistic data exchange between nine ports, went down very well," said Smith, "and it established that data exchange is feasible, and in some respects helpful.

"Members are convinced that the opportunity for considerable technical progress is now at hand and they wish to continue as an Association," said Sarich. "It could become the focal point for producing considerable economies in hardware and software purchasing, and in the standardisation of documents for cargo handling.

Members of EVHA and EASI are in close touch, which Sarich considers a preliminary move towards the ultimate objective of "a harmonised information system".

The European Commission are backing a European Ports Project which comprises three linked programmes:

- installation of a pilot data processing and communications system to link European ports;
- a study of computerising procedures for handling dangerous goods;
- a study analysis of how best to set up a final comprehensive data communications network to link European ports.

"With rapidly changing technology, the idea of using computers for port operations is getting more widespread," said Alex Smith, secretary of the British Ports Association, the representative body for UK ports.

"Within ports, the UK has progressed more in individual areas, especially with the aid of HM Customs. Customs-related activities play a prominent part of the traffic documentation flow, so we can't move out of step with the Customs. Felixstowe has its own activity starting in November, and that involves the Customs, although it is an interest exercise.

"But data exchange between ports is limited, not only in this country but elsewhere, and it is here that we are breaking new ground," Smith added. "Japan has very sophisticated computerised data facilities within port areas, but they don't hook up with each other."

The European pilot programme is the first of its kind. It linked nine ports (including Glasgow) in seven European maritime countries, and ran continuously between October 1981 and October 1982.

It concentrated on one class of information — vessel departures from one EVHA port to another, and over the year 11,000 vessel movements were recorded on an IBM 3033 mainframe run by the Danish company Datacentralen.

Five of the ports communicated with Datacentralen's mainframe via telex, two via microcomputers, Copenhagen port interfaced with its IBM 4331 maloframe, and Antwerp interfaced with its IBM 3033 machine.

In practice, there were problems matching communications soft-

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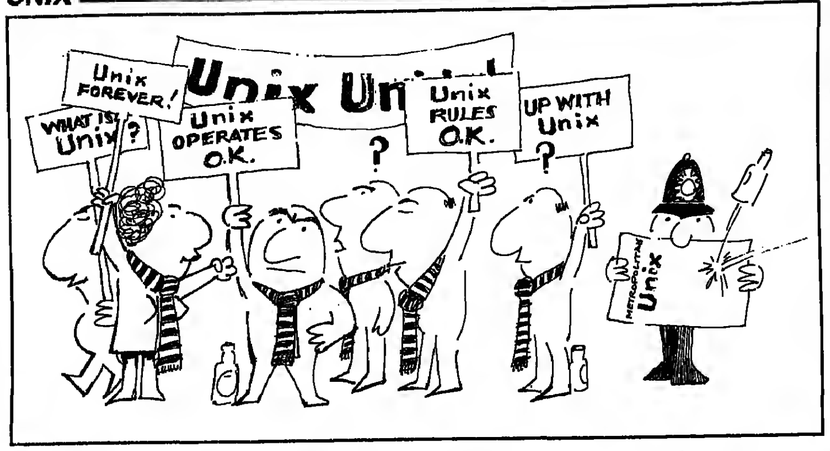
UNIX



Logica offers a Unix operating system to the commercial user

The Xenix implementation of Unix is in three parts. The business user needs to buy only the timesharing kernel and standard utilities. Adrian King explains the advantages

TO THE uninitiated, Unix is a rather overwhelming operating system, full of strange techniques and nomenclature, and generally very difficult to understand.

Because of this background, Unix's penetration of the commercial, as opposed to the scientific, marketplace, is far from what it should have been, especially given the operating system's inherent flexibility and excellent programming features. It is this situation that Xenix 3.0 will remedy.

Xenix 3.0 is Microsoft's latest implementation of Bell Labs' Unix minicomputer operating system. It is used with microcomputers, is fully compatible with Unix System III, and can run any System III software.

Beyond this point the similarities end, as Xenix 3.0 marks a complete departure from Unix as it has traditionally been seen by the end-user.

Xenix was introduced by Microsoft in 1980. By May of this year 20,000 units had been shipped worldwide and the operating system accounted for 60% of the Unix market.

With the launch of Xenix 3.0, figures of a totally different order of magnitude can be expected. For the first time the operating system has been tailored directly to fit the needs of particular end-users.

Logica, following the signing of a second source agreement with Microsoft last winter, has been actively involved in joint development on Xenix 3.0 and, following its UK launch in early August, has concentrated on "porting" the operating system to run on an extensive range of microprocessors and microcomputers.

First though, let's deal with the product. To begin with, Xenix 3.0 is sold in three parts — Timesharing, Software Development, and Text Processing Systems. The non-technical business user, for example, need only purchase the Timesharing System. This contains the Xenix system kernel and the standard utilities needed to support a workable operating environment.

An integral part of the package is a set of typeset documentation which has been written by technical authors (rather than programmers) specifically for the inexperienced user. While such documentation will come as no surprise to someone used to MS-DOS, for example, to an established Unix user the style of the documentation is a vast improvement.

Software developers, naturally enough, will need the Software Development System. This includes compilers, a linker, C libraries, include files, and all the special utilities required by experienced users for program development. The documentation supplied with this part of the system has been written specifically for programmers and more experienced users.

Finally, the Text Processing System contains text formatters, macros, and a number of utilities included in Unix System III but inappropriate to all but the specialist user.

The benefit to the end-user of splitting the operating system in this way is that he need only purchase those portions of the code that fit his particular requirements, rather than be swamped in utilities and compilers that will never be used.

Not only does this give considerable cost savings, it also reduces the amount of code that has to be loaded on to the system, thereby making it more efficient in terms of the amount of memory it requires.

The main benefits of Xenix 3.0, however, lie not in its much improved documentation, but in the facilities it has to offer over and above the standard Unix environment.

Xenix 3.0 can be menu-driven, as well as offering the standard Unix line-oriented interfaces. The user is guided by prompts and information while software is running, and a "Help" facility is included for any difficult situations.

The menus are easy to use, and will be familier to anyone with experience of the MS-DOS operating system or Microsoft's Multi-Tool applications packages, as they are common across the entire range of software.

Not only does this mean that a package such as Multiplan operates in the same way under both MS-DOS and Xenix, but the operating system is itself very easy to learn, for both the new and the experienced user.

As well as supporting menus Xenix 3.0 presents a common interface for mouse devices. The first package to make use of this will be the Multi-Tool word processing package, and the ability to drive mouse devices under Xenix is guaranteed to produce some very interesting packages in the near future.

The links between Xenix 3.0 and MS-DOS go beyond common menus and mouse support

LOGICA ... Adds a friendly shell

The links between Xenix 3.0 and MS-DOS go beyond common menus and mouse support. It is possible to read from and write to MS-DOS files under Xenix 3.0. This provides a further bridge between the two systems, and means that data files may be transferred directly from single- to a multi-user environment — a considerable time saving in such an upgrade.

Another interesting feature of the operating system is its considerable networking and electronic mail capability. This is based on existing networking and electronic mail programs, and has been considerably enhanced under Xenix 3.0. Commands may be entered on one machine for execution on another, and files may be transferred between machines.

The mailer is currently being used to a considerable extent both within Logica, and externally to systems in the UK, Europe and the US.

In theory, it is possible to access any Unix or Xenix machine anywhere in the world — finding computers across which to "hop" local messages is an industry all of its own in the States, and it's a lot cheaper than normal 'phone calls.

Besides saving the user money, Xenix 3.0 is very easy to look after. Administration is simple — user accounts can be added or deleted using single commands — and the system is also very secure, with file locking, user passwords and password ageing.

It is features such as these that shield the Xenix 3.0 user from Unix's inner complexities, while retaining all of the latter operating system's power and flexibility.

What is equally important to end-users, however, is that the system should run efficiently on their particular machines, be well supported and have a comprehensive range of proven and reliable software.

Logica's main role, alongside the joint development of the software, has been the tailoring of the operating system to a wide range of machines.

Logica's experience with Unix dates back over a number of years, with the company providing consultancy, training and support services, and developing Unix-compatible software packages for use in areas such as software and microprocessor development. This experience has not been used on the porting of Xenix 3.0.

In essence, porting is the rewriting of the machine-dependent part of the operating system for each manufacturer's particular hardware configuration. Whilst this has no effect on the way the operating system appears to the user, it is vital in terms of the size of the operating system and the speed at which it runs.

To date, Logica has been involved in adapting Xenix to the Intel 8086 and 8088, Motorola 68000 and Zilog Z8000 processors. Work is currently in progress on the National Semiconductor 16032, so Xenix 3.0 will soon be running on all the major 16-bit processors.

As the porting process can take as little as six weeks, any machines using the processors described can

be given access to the operating system extremely quickly. The DEC PDP-11, Plessey System 68, Tycom's Microframe and the Quest micro already run Xenix 3.0, and this list will soon be increased.

As well as porting the software, Logica also adapts the hardware-dependent sections of the user manuals for each particular OEM's machine. This ensures that all documentation is consistent, and is as helpful as possible to the end-user.

It also means that the OEM can pass the Xenix 3.0 product directly to end-users. Xenix 3.0 will be sold as a retail product — something which benefits OEMs and end-users alike.

Once the end-user has loaded the operating system, his immediate interest is in applications software. The final element of Logica's involvement with Xenix 3.0 is its support of a selected range of high quality, reliable software packages.

Whilst Xenix 3.0 can run any Unix System III software, it is often very difficult for smaller OEMs to market independent software, as they have to negotiate a separate distribution agreement with each supplier.

To remove this burden, Logica chooses what it considers to be the most appropriate software packages for the operating system, negotiates terms with the supplier, and then optimises the product for each machine. This still leaves the OEM with the option to choose a different product, if he prefers to.

The operating system has been tailored directly to fit the needs of particular end users

Xenix 3.0-compatible software currently supported by Logica includes Microsoft's industry-standard M-Basic, Multiplan, HCR Pascal compiler, and the Level II Cobol compiler, Animator and Forms-2 programming aids from Micro Focus.

To summarise, with Xenix 3.0 Microsoft has taken a well-respected minicomputer operating system, converted it for use with microcomputer architectures whilst retaining compatibility with the original product, added a friendly visual shell and mouse interface to protect the inexperienced end-user from the inner complexities, and repackaged it in a form that makes it readily accessible to — and easily understood by — specific classes of end-users.

Logica's role has been threefold. Firstly, through the second source agreement, it has directly influenced the development of the product for the European market and fitted it as closely to the needs of OEMs and end-users as possible.

Having done that, it is now in a position through its expertise in porting the product to make it available on all the major 16-bit microprocessors, and hence to any manufacturer who wants it.

Both functions are of great benefit to OEMs, end-users and the Unix-based industry in general.

Adrian King is OEM services manager for Logica's software products group.

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IRELAND

How Eire lured 250 electronics firms

Tax incentives, development grants and financial aid have persuaded many computer makers to set up in Ireland . . . Keith Holder reports

ELECTRONICS manufacturing in Ireland, particularly for the computer industry, has shown a healthy and sustained growth over the last 12 years. Thirty companies produced £35 million of exports in 1972: This has grown to almost £1.5 billion, with the number of companies close to 250.

Much of the growth can be attributed to the intervention of one body, the Industrial Development Agency (IDA) which through tax incentives, development grants and financial support, has persuaded companies including Digital Equipment (DEC), Prime, Westinghouse and Atari that Ireland is the ideal choice for European manufacturing.

This is no accident, according to Dr David Hanna, director of the IDA. "Around the early Seventies the IDA decided that electronics was good for Irish industry. It is a good, clean industry, there are no gas clouds, or polluted lakes, and it demands highly-skilled labour, which we already had."

Hanna said that after a period of analysis it was decided to go for specific areas such as small computers (because they had already missed the chance to try with mainframe manufacturers) and concentrate on the medical, process control, business and automotive areas.

Electronics is a good, clean industry, there are no gas clouds or polluted lakes, and it demands highly skilled labour, which we already had — David Hanna

A specific policy to avoid products with short life cycles, including consumer electronics and products which relied only on manual assembly, was also pursued because, said Hanna, "these would not encourage the sort of environment we were hoping to achieve both in terms of business and labour force

"We see our technological future with industrial end products which are high value added and longer life cycle because it generates work for local labour, with the benefits of training and specialisation".

The IDA is a little sensitive over the use of incentives to lure companies to the country. These include a fixed tax on profits of 10% until the end of the century, low cost finance, a 100% training cost subsidy, and generous help with factory premises.

Hanna admits that these make setting-up more attractive, but said: "They would not compensate for a poor workforce or a history of industrial unrest."

He maintained that the purpose of incentives was to accelerate the growth of a "technological cul-ture", and said that at first the idea was met with incredulity, particularly by the US companies that were approached.

Just how far this culture has progressed beyond the simple setting up of manufacturing facilities is open to question. True, the hoped-for knock-on effect from training has materialised. Original employees from DEC and General Electric training schemes are now working outside these companies either on their own or as part of other organisations.

Hanna estimates that 20 of the top executives in the Irish industry owe their success to these schemes and said employee migration was increasing every year.

Where the plan seems to have fallen down is in research and development. Many of the US-owned companies rely solely on the parent operation for new products and in some cases for applications research. Others confine themselves to carrying out simple modifications to adapt products for the European market.

One such company is Beehive International, which makes display terminals that emulate products offered by IBM, Burroughs and Hewlett-Packard. Managing director David Walsh said: "We simply do not have the facilities in-house and there is no chance of subcontracting as companies offering the level of expertise needed do not exist in Ireland."

He was critical also of Irish manufacturing for sub-assemblies and admitted that Beehive bought nearly all materials and equipment outside. Even when a supplier could be found, he said, it was usually more expensive.

The Irish factory has to modify the terminals to make them more ergonomic and acceptable for use in Europe — a situation brought about, according to Walsh, "by the stronger union presence over here."

New product lines, which mark a change of direction for the company, have been developed exclusively in the US. These are a personal computer and intelligent workstation which have been designed to combat the shrinking terminal marketplace.

One path around this obstacle was found by Meotec, which builds industrial systems based on DEC minis and micros for computer-aided manufacture. Company founder Mike Pearce said that though no help from DEC was forthcoming at first, a co-operative venture between Mentec, DEC and Motorola helped to sort out some of the development snags. As a result the company had to produce only a front end in order to complete the system.

Another constant theme among the smaller manufacturers, including Mentec, Beehive, Dataproducts and Modcomp, was the lack of an industrial infrastructure. All complained of the difficulty of obtaining quality goods from Irish suppliers and cited the UK as a major source for parts and sub-assemblies.

Technical support for non-Irish equipment was also criticised by Brian Browo of Dataproducts. He said: "We have had to train our own maintenance staff for things like oscilloscopes and test equipment because there are no service centres over here. We found that this was the only way to avoid costly delays when equipment broke down".

Despite these problems sales of Irish products are on the increase and companies are winning large contracts and orders. Modcomp, for example, has won orders from the British and Kuwait stock exchanges for its control and communications equipment valued at over $4 million, and Dataproducts has established itself in printers, capturing about one-fifth of the European market.

One bright spot on the research picture is the establishment of the National Microelectronics Research Centre in Cork.

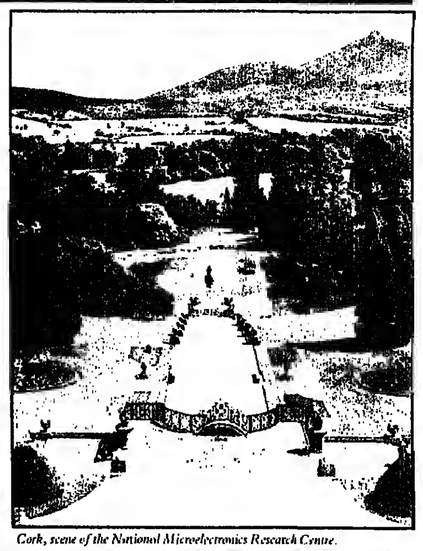
This forms part of University College Cork, and is part-funded by the state, the remainder coming from contracts from local industry.

The aim of the centre is to offer undergraduates the chance to get hands-on experience of chip design and manufacture. Facilities at the centre cover every stage from computer-aided chip design through layout and mask-making facilities, chip manufacture and testing. There is also a gallium arsenide IC laboratory which offers research into low noise diodes.

Another research programme is underway in develop CMOS processing.

They have already progressed from five-micron to three-micron technology, and are using this for industrial prototypes.

It is hoped that the graduates from this centre will not beat a path straight to the US but stay in Ireland to enrich the local industrial scene.



Cork, scene of the National Microelectronics Research Centre.

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PRODUCTS

Portable test system for 5¼in Winchesters

THE Instrumentation Division of Sintrom Electronics has launched a portable, low-cost microprocessor-controlled test system, the DX525, for 5¼in Winchester disc drives, which is claimed to offer accurate and thorough testing.

The DX525 is self-contained in a lightweight case which weighs 6lb and includes a 5V power supply, all necessary cabling and all control switches.

The microprocessor prompts the operator through the 16 pre-programmed functions and requests additional modifiers or parameters to complete each function. These are retained by the microprocessor so that subsequent tests may be run without re-entering the values. The prompts are via an eight-digit alphanumeric display on the control panel.

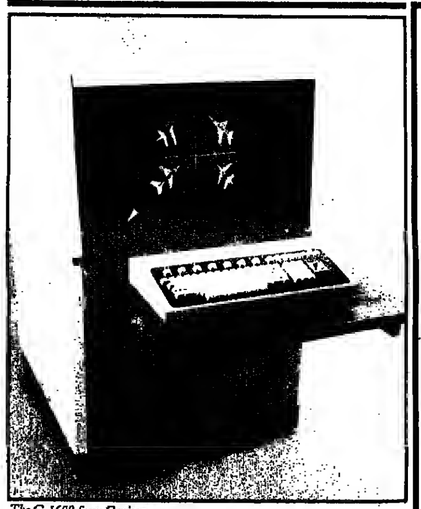
The DX525 can operate in single cycle or continuous modes, can be configured for a variety of manufacturer model types, and will permit the specification of a selectable error threshold.

Once connected to the disc drive through standard 20 and 34 conductor flat ribbon cables, the DX525 automatically exercises and evaluates all the major functions of the drive, which include device interface, device selection and sequencing controls, positioning electronics and the read/write circuits, and provides for user requested functions.

The system produces a flow map to indicate bad tracks, and overall error statistics are totalled by category.

The various functions such as keyboard scanning, display updating and interface protocol are controlled by the microprocessor. This allows the control panel of the DX525 to operate with just six control switches.

Sintrom Electronics (CW), 14 Arkwright Road, Reading, Berks RG2 0LS. Tel: (0734) 875464.



The G-1600 from Genisco.

Choose from 4,000 colours

THIS month sees the launch of the G-6000 and G-6200 interactive graphics terminals, which are suitable for a wide range of CAD/CAM and scientific data display applications.

The G-6100 is supplied with a 1536x1024x4 refresh memory that allows the selection of 16 colours for display from a palette of 64 hues. The G-6200 has eight or 12 refresh memory planes which allow a selection of up to 4,096 colours from display of a palette of over 16 million hues.

They are available in two viewable resolutions: 768×512 with 60Hz noninterlaced refresh (G-6120 and G-6220) or 1391×1024 with 30Hz refresh (G-6110 and G-6210).

Genisco Computers (CW), 7 Notre Dame Mews, Northampton NN1 2BG Tel: (0604) 24621.

Geveke adds to printers

THE multi-purpose GP300 has been added to the Geveke product range. Manufactured by Philips, it offers high-speed data printing (300 cps) and correspondence quality (80-100 cps) with a range of specialised fonts including one for teletex/electronic mail.

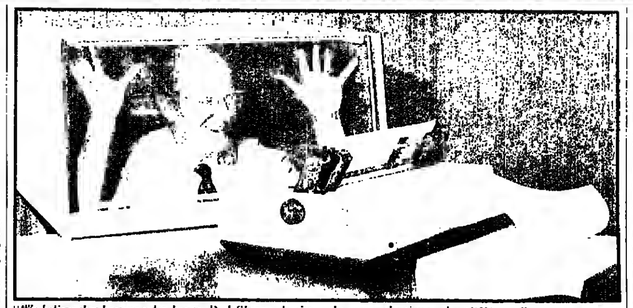
The printer has two models, the standard GP300, for paper widths up to 340mm and the GP300L, with capacity for 400mm.

The GP300 is compact, quiet, economical and simple to operate, says Geveke. It is supplied with a V24/RS232C interface and a switch-selectable DTR and X on/X off protocols.

It is equipped with two ROM fonts (Data and Gothic) and a maximum of nine fonts may be selected by software or operator.

Geveke Electronics (CW), RMC House, Vale Farm Road, Woking, Surrey. Tel: (04862) 26331.

The DX525 test system.



"We believe that keeping tales director Dick Sheppard quiet – the noise reduction is about 90% – allows our printer to operate 30% more efficiently," says Action Computer Supplies.

Peace and quiet in the office

A FULL range of silencers made by Acoustic Engineering has been introduced by Action Computer Supplies. The range of styles and sizes available covers all standard printers from mini-printer size to large units for printers with sheet-feed attachments.

Use of the silencers can reduce noise by up to 90%, improving operator attitude and performance, efficiency and space utilisation. They are made from high quality stove-enamelled metal, with bronze-tinted acrylic screens.

Action Computer Supplies' range includes all types of ribbons and cassettes, flexible diskettes and cartridges, printwheels, continuous stationery, copying products, storage units, cleaning products, silencers and accessories.

Manufacturers include Aba, Acco, DRG, Dysan, IBM, 3M, Moore Paragon, Perfect Data, Stumpfun, Standard Check Book and Wabash.

Action Computer Supplies (CW), 6 Abercorn Trading Estate, Manor Farm Road, Alperton, Wembley, Middlesex HA0 1WL. Tel: 01-903 3921.

Memory and disc storage doubled

DOUBLED main memory and disc storage and the ability simultaneously to support up to four streaming magnetic tape units are new features announced by Microdata Information Systems for its range of Sequoia 32-bit supermini's.

The main memory limit is raised from two to four megabytes of error correcting memory and the disc storage limit doubles from one to two gigabytes through the use of the company's new high capacity 256-megabyte disc drive.

The streaming MTUs stream at 1ulbips at 1600bpi for a binary save or 50ips at 3200bpi when there is a need to pack more information on to a single tape.

The enhanced systems offer considerable flexibility in the allocation of MTUs to tasks, says Microdata. Several units can be allocated to a single job and the tapes pre-loaded, enabling the task to be completed without further operator intervention.

Microdata Information Systems (CW), Maylands House, Maylands Avenue, Hemel Hempstead, Herts HP2 4RL. Tel: (0442) 61266.

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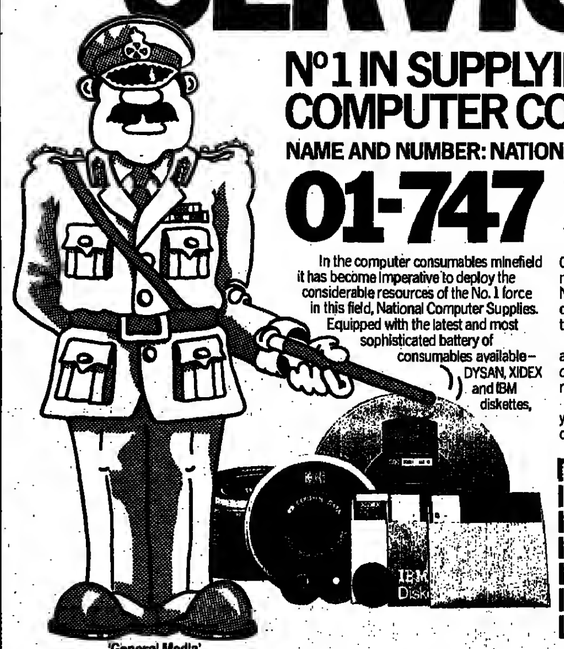

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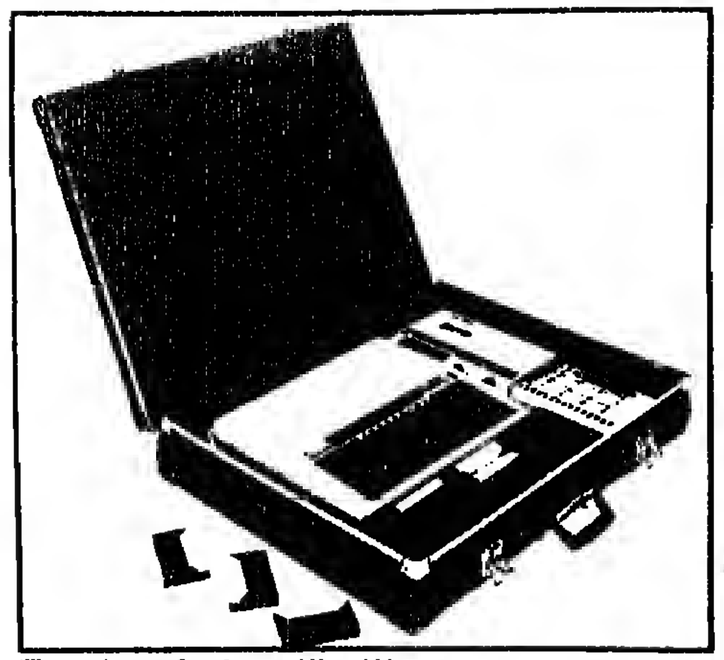


The carrying case from Intastor Micro Aids.

Case for the BBC

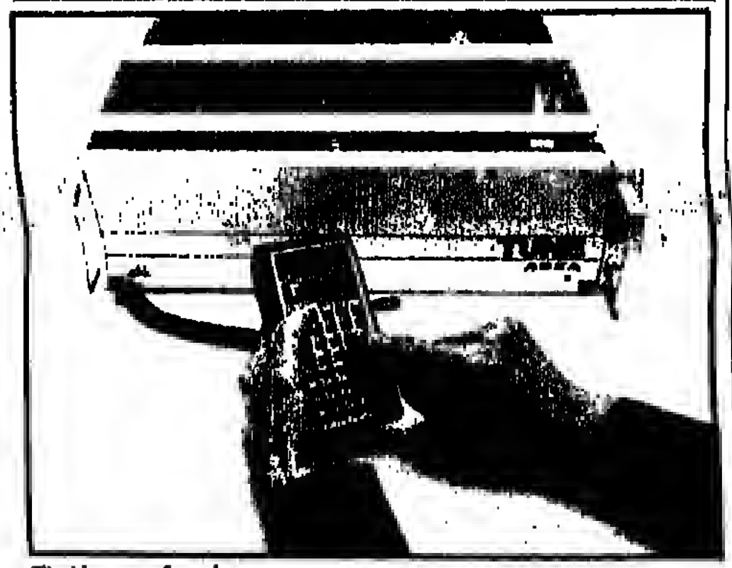
A CUSTOM-BUILT carrying case has been added to the official range of BBC microcomputer support products by Intastor Micro Aids.

Manufactured in tough, durable fibre board, the new case is designed to accommodate the microcomputer and all accessories. The inner fitments are vacuum-formed in an engrained ABS finish to give separate compartments for computer, all connecting leads, a cassette player (to maximum measurements of 11x7x3 inches), software cassettes and the course handbook.

The case has a removable lid, interior foam protection, protected corners, plated locks and comfortable carrying handle. It measures 28½x22x5 inches.

This is the latest addition to a list of Intastor BBC microcomputer support products which also include the official BBC programmers' kit, two sizes of printout binders and a programmers' grip binder.

Intastor Micro Aids (CW), Freepost, Stroud, Gloucester GL6 0BT. Telephone (045 383) 2334.



The Novatune from Asea.

Micro-based control

A CONTINUOUS process control system which automatically adapts control parameters to match changing process characteristics has been developed by Asea. The system, called Novatune, is microprocessor-based and capable of controlling from four to 16 control loops. It uses a process modelling technique which allows the calculation of control parameters to produce an output signal which seeks to minimise the variance of the error signal as a performance criterion.

By continuously monitoring the effects of the control signal on the process, without disturbing it, the model is modified and the control signal adjusted to suit changing process dynamics.

Fully modular in construction, both in hardware and software, Novatune can be configured to suit any control requirement by simple software module interconnection by means of a hand terminal. The full software library is resident in EPROM and in addition to the three versions of the Star (self-tuning adaptive regulator) module, there is a comprehensive range of logic, timing and arithmetic elements.

Asea (CW), Electronics Department, Earl Road, Cheadle Hulme, Cheshire SK8 6QP. Tel: 061-485 7121.

Monitor breaks the £200 barrier

A PURPOSE-DESIGNED 14in colour monitor at under £200 heralds the entry of Fidelity, a West London consumer electronics company, into the computer industry.

The company has incorporated a wide variety of advanced features into its CM14 colour monitor. It accepts RGB, RGBY or composite video inputs, with audio, via a 21 pin peri-television socket. Thus the CM14 will interface with most computers or games machines capable of driving a monitor, or work equally well with VCR, disc, cable data or satellite adaptars, says Fidelity.

Image definition is outstanding using a 90° 14in in-line high brightness colour tube with a video band width of over 12 MHz. A detachable anti-glare tinted glass front is also provided.

The wide range of inputs available presents the business or leisure user with a monitor which will not require changing when updating the computer. The dealer needs handle only one monitor to cover a complete range of computers and games.

Fidelity has used the latest state of the art IC technology, with minimum component count.

Bill Curtis, special products manager for Fidelity, said: "Until now monitors have been overpriced and difficult to buy or stock. The CM14 breaks the £200 price barrier with a high quality product which will be available from both specialised computer stores and major radio and TV outlets. Initial response has been encouraging."

Fidelity (CW), Victoria Road, London NW10 6ND. Tel: 01-965 8771.

Qume gets graphics

GRAPHICS for the Qume QVT-102 terminal is announced by Selanar Graphics. The SG102-Q is a field installable printed circuit board that uses the standard Qume QVT-102 communication interface. All existing terminal capabilities are retained.

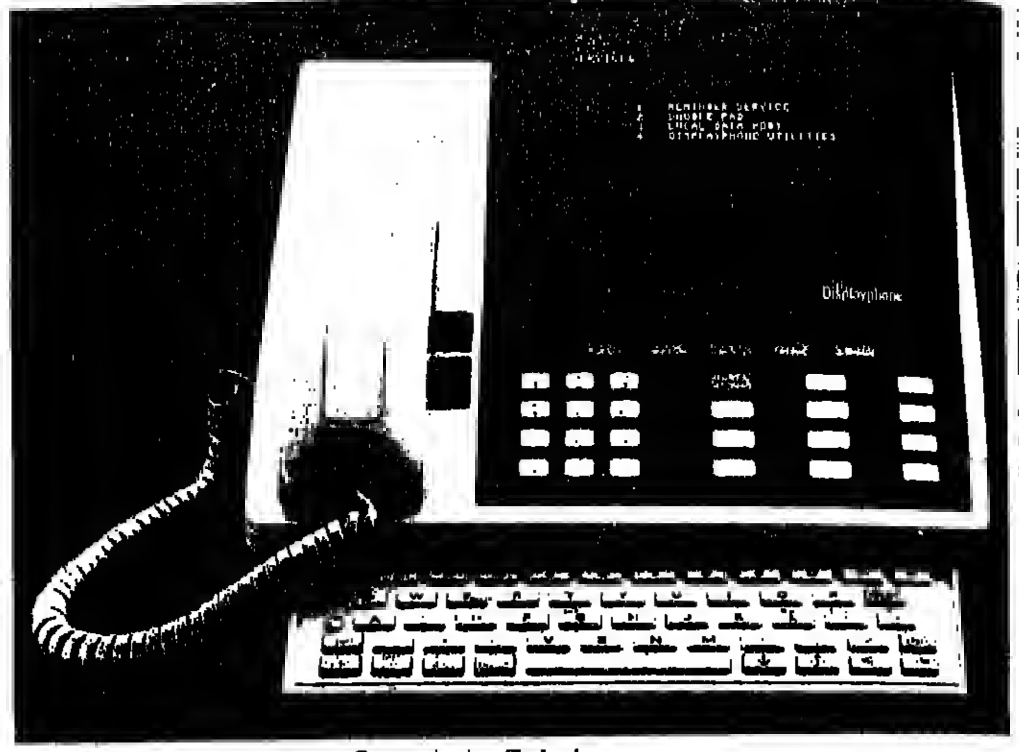
Features of the SG102-Q include Tektronix 4010 and 4014 emulation as standard. The Tektronix 4014 emulation mode features 680×290 dot resolution on an 8×5 inch screen. Also featured is the large addressable plot area (4096×4096), vector variation plot, incremental plot, and Tektronix Plot 10 compatibility.

The SG102-Q has two pages of completely independent memory.

The SG102-Q capabilities include vector and raster graphics.

Selanar's local distributor is Datatrade.

Datatrade (CW), 38 Billings Road, Northampton NN1 5DQ. Tel: 0604-22289.



The Displayphone from Intercompany Communications Technology.

Displayphone stores 81 numbers

THE Displayphone from Intercompany Communications Technology, is a compact and low-cost terminal, compatible with IBM and DEC computers. It connects to two telephone lines, one for voice (through a BT approved handset) and one for data communications (through a built-in 300/300 or 1200/75 autodial modem).

It can store up to 81 telephone numbers and has a fully qwerty keyboard which slides out from under the machine, sliding back again when not in use.

The Displayphone occupies one quarter of the desk space of a conventional terminal, yet combines full terminal functions with advanced communications facilities.

Senior managers of several leading UK companies have already shown interest in the Displayphone. Keeping management in touch with their companies' databases (as well as external databases) is seen by ICCT as the major application of the device.

Intercompany Communications Technology (CW), 76 Cannon Street, London EC4N 6AE. Tel: 01-248 8895.

High density graphics in colour

A HIGH performance raster-scan colour graphics terminal has been added by Tektronix to its 4110 series of intelligent display products. The 4115B provides high density graphics at display speeds which enable it to meet the demands of applications in mapping, circuit board design, and finite element modelling.

Graphic images stored in the terminal's 32-bit co-ordinate space are displayed at a resolution of 1280x1024 pixels and a picture repetition rate of 60 Hz, a figure which reduces flicker and consequent operator fatigue.

A neutral density filter consisting of optical coatings is employed to provide optimum contrast, even under conditions of high ambient lighting.

The 4115B incorporates a proprietary technique that virtually eliminates convergence errors in the shadow-mask colour tube display, says Tektronix. Called Tektronix Auto-Convergence, it uses a feedback method of sensing and dynamically controlling convergence, reducing misconvergence errors to less than 0.2mm over the entire display area.

This improvement in convergence accuracy is said to result in more precise colour reproduction, higher density graphic resolution, and increased image sharpness.

Writing rates of the 4115B are over 30,000 vectors per second, achieved by the use of a bipolar bit-slice graphics processor operating in tandem with the terminal's 80286/80287 CPU/floating point processor. Display lists may be created based on 12, 16 or 32-bit co-ordinate space, allowing optimum match to the application. The display list is then travelled by the graphics processor, applying any requested two-dimensional transformations.

Tektronix (UK) (CW), PO Box 69, Harpenden, Herts. AL5 4UP. Tel. (05827) 63141.

The Tektronix 4115B high resolution colour graphics terminal.

Addition to VME plug-in range

A SIX-channel serial I/O board for VME applications is the latest addition to the growing range of VME plug-ins. It provides six independent channels which can be individually set to handle nearly all the established synchronous and asynchronous communications protocols.

Each channel has its own multi-protocol controller with the ability to generate a VME bus interrupt at levels one to seven and to drive three independent auto interrupt vectors.

The board has a wire wrap area which is fitted with five RS232 drivers, six RS232 receivers, two RS422 drivers and two RS422 receivers that can be wired to suit the application. In addition the board includes six 26-pin connectors.

Microsystem Services (CW), PO Box 37, Lincoln Road, Cressex Industrial Estate, High Wycombe, Bucks, HP12 3XJ. Tel: (0494) 41661

Speed-up for VDU input

A SOFTWARE package which is claimed to simplify the design and implementation of interactive and intelligent screen input and output on a visual display unit has been developed by I.T. Research.

Known as Easy-10, the new package offers the user on-screen control facilities for rapid data entry.

With Easy-10, a user can design a layout on the visual display unit and link the input and output layout on the screen to the main program. In addition, data can be read from, and written to, the screen in any order to a given location on the screen allocated to that particular variable.

Using Easy-10, the time saving in program writing can be between 50% and 75% of the time normally required to write code, and for large screen-oriented interactive programs the savings can be even greater, says I.T. Research.

I.T. Research (CW), Pointdike House, Lombard Street, Newark, Notts. NG24 1XG. Tel: (0636) 71221.

Remote plotting for Vax users

A REMOTE high speed plotting capability for users of DEC PDP-11 and DEC Vax computers is announced by Versatec. The new facility emulates Hasp or 3780 workstations, and supports binary synchronous communications protocols under DEC Vax/VMS, RSX-11M/M-Plus and RT-11 operating systems.

It will drive any Versatec plotter including the company's recently announced full colour plotter.

The system includes a remote plotting controller, Versatec's Random Element Processor and electrostatic plotting software for DEC systems.

According to their configuration DEC users can choose between Hasp multi-leave Model 440-30 and bisync 3780 Model 440-20 remote plotting controllers, both of which support remote communications at baud rates of 4800, 9600 or 19,200, provide line trace and memory diagnostics, and operate in half or full duplex modes.

Versatec's Random Element Processor accepts unsorted vector data for the host DEC computer and sorts and rasterises it for electrostatic plotting without the need for host intervention. The processor thus reduces host overhead, I/O, and memory requirements.

Versatec's Random software provides for high speed electrostatic plotting on a wide range of commercial graphics packages and existing user programs running under DEC operating systems. The software enhances efficiency of complex graphic entities such as texts and circles by reducing the amount of data that needs to be processed, and the associated requirements for memory and output. Typical data reduction is 7:1.

Versatec Electronics (CW), 27-35 London Road, Newbury, Berkshire RG13 1JL. Tel: (0635) 42421.

Remote plotting facility for PDP-11 and Vax users.

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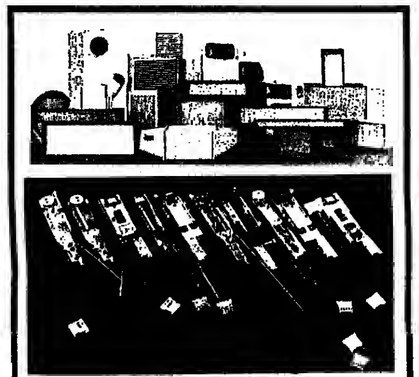

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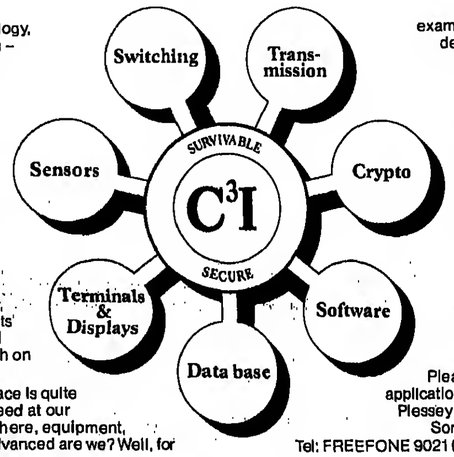

The Christchurch experience. No other place is quite like it! Literally, we have everything we need at our fingertips – professional working atmosphere, equipment, long-term, multi-phased projects. How advanced are we? Well, for example, the date at which we move to ADA is decided; every engineer has direct on-line access to advanced CAD/CAM facilities, VAX 11/780's, INTEL MDS etc etc – all on our 'green field' site.

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Tel: FREEFONE 9021 (24 hour service). Please quote ref CW20.

PLESSEY
electronic systems

[6029]

Communications Technologists

£9-£11,000 : LONDON

We are looking for two Communications Technologists to join our corporate communications team based in London. The first post has responsibility for the supervision of contractors involved in the installation of computing and communications equipment. The responsibilities of the second post include support of a complex international communication network, and associated switching equipment.

Candidates must possess a minimum qualification of TEC Higher Certificate or equivalent.

Experience for the first post must include 6 years' computer engineering in a supervisory capacity with a good knowledge of communications. The second post requires 6 years' in-depth experience of all aspects of communications support in a complex network.

Starting salary including London allowance will be in the range of £9,000 – £11,000 per annum and benefits include an excellent non-contributory pension scheme, luncheon club and, where appropriate, assistance with relocation expenses.

Please write with full details of qualifications and experience, quoting ref. FY.102, to:

Mrs. C. MacCarrick, Recruitment and Placement Branch, The British Petroleum Company plc, Britannic House, Moor Lane, London EC2Y 9BU.

[6032]

The British Petroleum Company plc

SENIOR SYSTEMS ANALYST
PROGRAMMING TEAM LEADER
PROGRAMMING SPECIALIST

West Yorkshire

Analyst c £12,500
Leader/Specialist c £10,000

Our client is the autonomous computer services subsidiary of a well-established, highly profitable retail group which is a major influence on the High Street scene. Recognition of the future key role of computer services in group plans is backed by substantial capital resources.

To effectively service increasing user requirements, the company needs high calibre professionals to enable them to progress several major development projects. Candidates must possess natural communication skills and the confidence to develop sound user rapport.

Male or female applicants should have at least 6 years relevant experience with IBM mainframe involvement. The Senior Systems Analyst must have experience in database design and a knowledge of retailing or finance credit systems. The Senior Programmers will need to be proficient in COBOL & CICS and ideally, familiar with application development languages such as MANTIS. Major benefits apply including generous assistance with relocation.

Please send career details to John Perkin, Refs S.A. 10 and P.S.5.

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As a member company of a successful British Electronics Group, we are a major force in the communications and tactical command and control sphere, and have a range of interesting projects (and positions) in these and other areas. You will be working in high calibre teams and entrusted with individual responsibility for the development of specific program suites and modules, mainly on DEC VAX machines.

High commencing salaries are offered, together with paid overtime and regular reviews, and comprehensive relocation/subsistence packages for all appropriate appointed candidates.

To confidentially discuss these opportunities without obligation, please telephone Myriad on Reading (0734) 591151. Alternatively you are invited to complete and return the Freepost coupon for an information pack.

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to £16,000 Surrey

for a Creative Manager with a technical background.

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Their central programming resource comprises some 30 staff using structured COBOL techniques on a wide range of development and maintenance work. To manage this team, our client seeks ambitious applicants with in-depth mainframe COBOL experience and, above all, the ability to motivate staff and improve performance through creative leadership.

Besides the normal aspects of work allocation and project co-ordination you will be responsible for: technological improvements using advanced development tools and programming language innovations; performance improvement through staff assessment and planned training; the overall co-ordination of other aspects of computer support by liaison with Business Analysts, Operations, Data Admin. and outside suppliers of labour and software.

If you're ready to progress from Chief Programmer or if you've simply outgrown your current programming or project management role, then we can both benefit from an early discussion.

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(60711)

B M S

Computer Appointments made easier

Green Field Opportunities

This progressive and successful Group of Companies, having recently taken the decision to form a new central Computer Department, now seek two key people for the challenging task of establishing the level of standards and credibility required to provide facilities and support to each subsidiary company.

DP Manager
c£12,000 pa + car

Establishing a new Group Computer Facility requires sound technical and managerial skills. Whilst the Company already possess certain computing skills, based on Univac hardware using RPG II, a mature individual is required to co-ordinate and direct the activities of the team.
Though certain application areas have already been implemented, further enhancement and development is expected in the immediate future. As the DP Manager, your expertise will be sought in establishing user requirements for each remote site and then developing systems designed to meet their needs.
This is an excellent opportunity for an accomplished DP Professional to exercise his influence within a developing situation, where efforts will be further rewarded as the environment expands.

Analyst/Programmer
c£10,000 pa

Our Client is seeking to complement the existing team by recruiting an Analyst/Programmer with experience gained on Univac systems. Working as an important member of a small team, you would be developing computer systems within a real growth situation and in so doing extend the facilities available to users at remote sites covering a variety of application areas.

An active period of enhancement and development is imminent with the Analyst/Programmer receiving training in RPG II if required. In addition, computer systems are about to be introduced to several of the sites and consequently involvement will be wide ranging, from inception to implementation.

Put simply, this is an ideal opportunity to show your capabilities and assume greater responsibility as the department grows.

Within this green field computing environment, the opportunity to formulate the establishment of high standards and professional user relationships, will provide a highly rewarding environment for career and personal growth. While technical skills are obviously an important factor within a new Computer Department, the areas of character, personality and indeed the ability to liaise at all levels of Management will be a prime consideration with these appointments.

Our Client is situated in a very pleasant location and provides excellent employment benefits, including relocation assistance where necessary.

Candidates should contact **Brian Harris**, Senior Consultant on **021-236 3781** (24 hour answering service) or **0788 77732** (evenings and weekends until 9.00 p.m.).

(60715)

Technical, Sales & Management Appointments

ESR

Specialist Computer Recruitment Ltd

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Applications Programmer

LONDON W1 up to £10,480

This vacancy, in our Transmission Planning Department, is to help provide a computer based engineering applications service. This will involve the development of software facilities and the provision of a programming and problem solving service.

Candidates must have 2 years experience in technical computing at Programmer level, and 'A' levels in numerate subjects.

Salary will be in the range £9,125-£10,480. Benefits are those normally associated with a large progressive organisation.

Please write with full details of age, experience, qualifications and present salary, quoting reference PS/6244O1/768, to:
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59 Bryanston Street, London W1A 2AZ.

(60721)

BRITISH GAS

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Ticketshop backed by multinationals is a new rapidly expanding company in the UK being the leading supplier of computerised booking systems to the entertainment industry.

Our growth means we require a Programmer/Analyst with considerable experience in extended Basic plus and Digital PDP 11 systems to work on enhancements and expand our existing credit card EFT system.

The applicant must have the ability to maintain the system software, develop and programme new projects and deal with end users.
The opportunity exists for a person to move quickly into a senior position within the company. If you feel you have the background experience and personality to fulfil this demanding role, write now with detailed cv to: Richard Klim, TicketShop Limited, 1A Union Street, Reading RG1 1EU.

(60059)

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Two years' experience preferably on IBM Hardware

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£10,242-£11,052 per annum

The Thames Valley Police have a vacancy for an experienced Analyst/Programmer to assist in the development and maintenance of existing and proposed computer systems.

The Force currently operates a Honeywell 6060 mainframe computer which is due for replacement. Experience of Honeywell equipment in an online environment would be an advantage.

The successful applicant will join a project team comprising of police officers and civilians involved in the development of operational and administrative systems. The post will be based at Police Headquarters, Kidlington, Oxford and assistance towards removal expenses may be given in approved cases.

For an application form and job description write to:

The Principal Personnel Officer, Thames Valley Police Headquarters, Kidlington, Oxford OX5 2NX, or telephone Kidlington (08675) 4343, Ext. 267 during office hours.

Closing date: 4 November, 1983.

(60091)

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You will have a minimum of two years experience in a manufacturing, engineering or commercial environment. First hand knowledge of **Organisation and Methods techniques, manufacturing processes or accounting procedures** will enable you to work more effectively. Good communication skills are vital and experience of package evaluation and implementation would be useful.

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Our Client is a world leader in the production of sophisticated electronic systems and need the most up to date techniques and systems to maintain their lead.

The company is located in South East England and there are excellent local housing, shopping and leisure facilities and good communications to surrounding villages and the coast. Salaries of up to £10,000 pa and an excellent benefits package will be supported by relocation assistance as appropriate.

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As one of the world's leading manufacturers of computer graphics products and systems, CalComp already holds the number 1 position in a number of areas in what is one of the most dynamic and competitive sectors of today's computer industry.
The Company's advanced and expanding product range currently includes pen plotters, electrostatic plotter/printers, digitizers, interactive graphic displays and complete, minicomputer-based turnkey CAD systems, all of which combine to put us in a position where we are now set for a period of rapid and sustained expansion.
To help support this expansion the following positions have been created within our European Support and Marketing Group based at Wokingham. All positions involve frequent short duration European trips.

Support Programmer
Graphics Systems
c. £11,500 + Benefits

This is an ideal opportunity for an experienced Fortran Application programmer with a good academic background who wishes to move into the area of Interactive Graphics Systems.
Our IGS-400 and IGS-500 range of systems comprises state-of-the-art hardware and software aimed at the Architectural, Engineering and Construction industries. The recent growth of our customer base, along with the planned introduction of a series of new software products, has created a vacancy in our European Support Group.
The successful applicant will join the Systems Product Support Group responsible for providing front line support to our sales companies throughout Europe. The job entails the specification and writing of customer specials, enhancements to existing products and the technical launch and support of new software products.

Fortran Programmers
Graphics Peripherals
c. £9,000 + Benefits

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The Company offer for sale one of the most comprehensive ranges of graphics peripherals and controllers in the industry. A constant challenge is to attach these peripherals and controllers to an ever increasing number of host computers and to support graphics and applications software within these hosts.
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European Marketing Assistant
Graphics Peripherals & Systems
c. £11,500 + Benefits

Reporting to the Product Marketing Manager – Europe, the European Marketing Assistant will work on a wide range of market planning, promotion and monitoring projects.
This is primarily a communications job: ensuring that CalComp's many European Operating Companies are fully equipped with the latest reliable information and tools necessary for aggressive sales and promotion in a highly active and competitive market.
The successful applicant should have experience in multi-national marketing and promotion activities, particularly with regard to the monitoring/reporting of results.
CalComp also operates through Distributors and Dealers in many markets, and experience in working with or for such organisations would be of considerable value.

To apply for any of these positions please ring or write sending full CV to:
Maureen Parish, CalComp Europe Ltd., Graphics House, 4 The Courtyard, Denmark Street, Wokingham, Berks RG11 2AZ. Telephone (0734) 781500.

CALCOMP
INTERNATIONAL DIVISION

(6038)

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Your next career move to a more rewarding way of life!
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PRODUCT DESIGN & SYSTEMS DEVELOPMENT . . . our computer systems business is based on rapidly advancing technology and our continued success depends upon remaining at the leading edge of the technology. To meet this challenge a high proportion of our effort and capability in hardware and software is focused on the evaluation and continuous development of new innovative products utilising advanced versatile systems . . .

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For an informal discussion . . . please contact Colin Roberts, Career Development Manager on 061-428 0771 during office hours and 061-428 0194 after 5 p.m. and at weekends, or write to Colin, quoting reference 329/43, at Ferranti Computer Systems Limited, Bird Hall Lane, Cheadle Heath, Stockport SK3 0XQ.

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- the stimulation of a growth environment – DP staff has increased from scratch to over 100 in seven years, and further growth is planned
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- a high level of job satisfaction, resulting from a solid project involvement and personal responsibility
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Our clients have a commercially-oriented mainframe installation, with a critically important function in controlling and monitoring business activities. The latest hardware and software, with a network of over 100 terminals nationwide, are used. To make possible the further growth of effective computer-based systems, we have been retained to recruit additional Systems Analysts at a senior level.

This opportunity will interest people who have:

- solid analysis experience (say, five years or more) including large systems, preceded by COBOL programming
- had involvement from feasibility studies through to implementation
- good leadership qualities and management potential
- sound educational attainments (ideally but not necessarily to degree level)

If you can match these requirements, please ring us in confidence for a career discussion, quoting ref. 194 CW. Messages after hours will be recorded.

(6088)

EDP SYSTEMS 01.637 5796
52-53 Margaret St. London W1N 7FF

SALES OPPORTUNITIES KUWAIT

Diyar United Trading & Contracting Company, one of Kuwait's fastest growing distributors of Prime and Calcomp systems, are seeking talented and ambitious sales executives for their Kuwait office.

The ideal candidates should have three to five years' sales experience and account management with at least two years' preferably on project management, draughting/graphics applications.

Responsibility will be to develop, maintain and achieve sales targets within a specific market.

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The company offers attractive basic salary related to experience plus generous commission structure. Also usual expatriate benefits will apply.

Interviews will be held in London. Please send completed C.V., telephone number, address, and if possible telex number.

dub Diyar United Training & Cont.Co.

To:
Marketing Manager
Diyar United Trading & Contracting Company
P.O. Box 44240
Hawalli – Kuwait

(6091)

VM Specialist

London Based — *c. £17,000 P.A. plus car*

"A rare opportunity to join one of the world's foremost manufacturers, and in so doing greatly enhance your future prospects and technical abilities."

Our Client's large scale, IBM compatible system has been developed around the very best of innovative technology, and is the spearhead of a superb product range embracing mainframes, distributed processing systems, personal computers, etc.

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Naturally, a product of this quality demands high calibre support, and a consequence of this success is an additional requirement within their team of highly skilled and motivated professionals. Already the team comprises vast experience of the IBM mainframe and compatible market, and this new appointment is for a candidate with a systems programming/systems engineering background, specifically with sound experience of VM. Equally important, since duties involve working closely with customers in a pre and post sales role on all aspects of software development and support, is that you are able to demonstrate well-developed interpersonal skills. However, equal consideration will be given to candidates from user, software house or manufacturer environments.

In order to attract a candidate with the above skills, and of the calibre required, an extremely attractive salary and benefits package is offered, which will include company car.

If you feel you match the requirements, and wish to join an Organisation offering an unequalled opportunity for technical and career advancement, 'phone **PETER LEES on 061-833 0427** (24 Hour Answering Service) or 0902 632141 (Evenings & Weekends before 9 p.m.).

Technical Sales & Management Appointments

(6076)

SCR
Specialist Computer Recruitment Ltd

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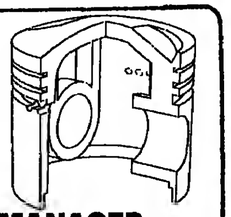

The rapid expansion of SHAPE DATA has led to the creation of several new posts. Opportunities exist as follows:

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responsible for developing the existing network of distributors and for direct sales to end users and system builders overseas.

SALES SUPPORT ENGINEER

to perform benchmarks, demonstrations and presentations. A mechanical engineering background is essential.

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to initiate a major new development in the area of robotics and animation. Relevant experience and the ability to manage a new team is essential.

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to provide training and advice for customers, quality assurance, software conversion and the handling of error reports.

Shape Data produces state-of-the-art software for mechnical engineering design and manufacture based on complete solid model product descriptions.

If you have a relevant background to degree level and would like to be considered for a job in a stimulating, friendly environment located in central Cambridge and with a very competitive salary, please write enclosing your cv to:

Dr C. A. Lang, Shape Data Ltd
2 All Saints' Passage
Cambridge CB2 3LS

shape data ltd

(6027)

SOFTWARE SPECIALIST

CENTRAL LONDON Up to £12,000

TECHNICAL CHALLENGE & VARIETY
MAINFRAME WITH MINICOMPUTERS
EXTENSIVE COMMUNICATIONS NETWORK

You would be working in a small technical software support team, forming an important part of our clients' modern mainframe installation, where high standards are maintained and up-to-date methods are used. The appointment offers:

- real potential for creative people to make a positive contribution
- varied, challenging work, including operating system enhancements, performance measurement, development of in-house software, problem solving and technical advice to users
- training in the latest techniques, including database and TP
- sound career prospects – if you have management skills, you could be appointed to a team leadership post.

This opportunity will interest specialists with significant mainframe software programming experience; including VME/B, and ideally TPMS or IDMSX.

Please ring us for a confidential exchange of information, quoting ref. 199. Messages will be recorded after hours.

(6088)

EDP SYSTEMS 01-637 5796
52-53 Margaret St. London W1N 7FF

OPERATIONS MANAGER

SOFTWARE/HARDWARE DESIGN
£14,000-£18,000 PER ANNUM

Intelligent Software are designers of high-quality microcomputer software and products such as the Elan Enterprise Computer, the Milton Bradley Chess Robot, the Biztek Electronic Note Pad and the World Champion Chess Machine.

The company is seeking a highly-proficient organiser, with a background in electronics or microcomputing, to provide overall management and support for on-going projects of the company.

The successful candidate must be able to work closely in a creative atmosphere with extremely talented engineers and programmers.

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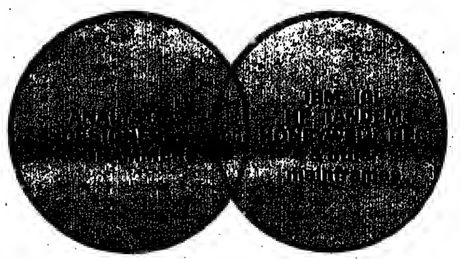

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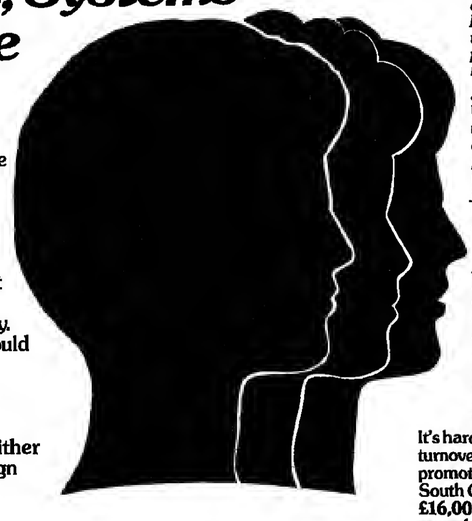

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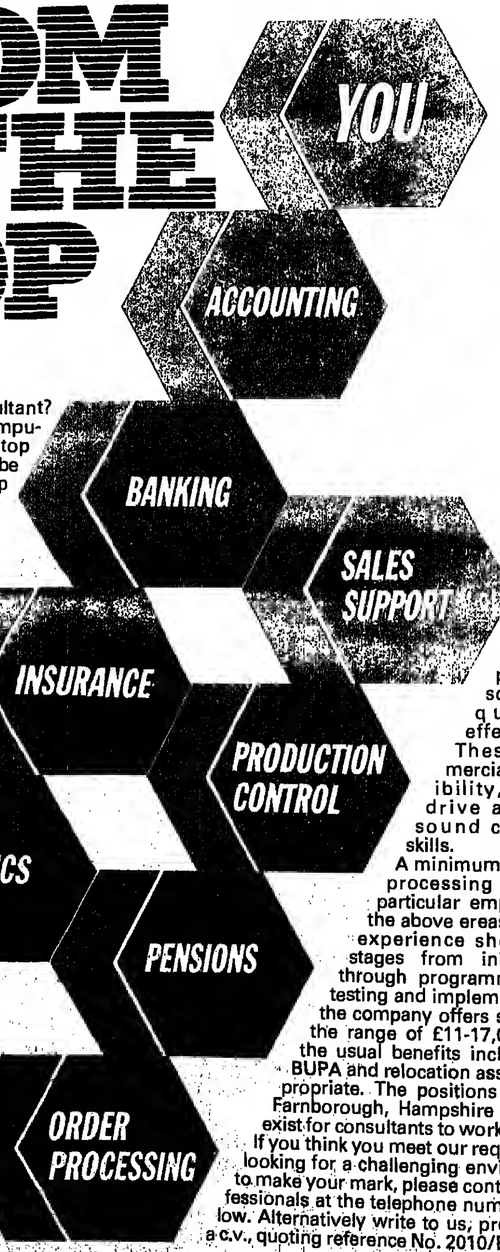

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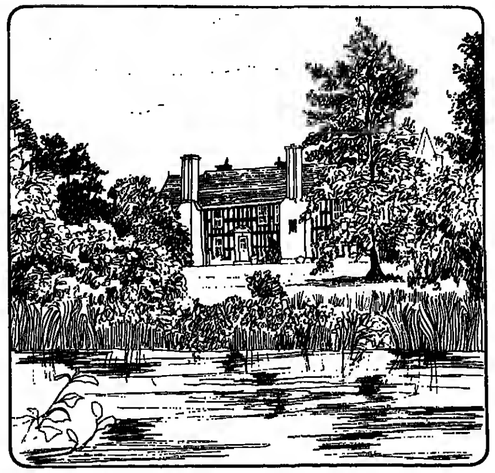

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(8042)

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Salary is subject to review on 1 January 1984

Benefits include relocation package and mortgage subsidy (where applicable), non-contributory pension, free life assurance, subsidised restaurant, sports and social club and staff discount shop.

Requirements

Abbey Life has a vacancy for a Computer Operator with a minimum of 1 years experience of MVS/JES2 (VS1 would be considered). Knowledge of JCL and utilities would be an advantage but not essential. 5 'O' levels (including English and Maths) are also required.

The Company operates a 5 day, three shift system, currently under MVS/SP on IBM 4341 and 3083 CPUS with ACF/VTAM, CICS/VS and ROSCOE.

Please write or telephone for an application form to:

Val Hastrop or Alison Davies,
S. & D.P. Technical Recruitment,
Abbey Life Assurance Company Ltd.,
80 Holdenhurst Road,
Bournemouth BH8 8AL.
Tel: (0202) 292373 ext. 4444.

Abbey Life

(8108)

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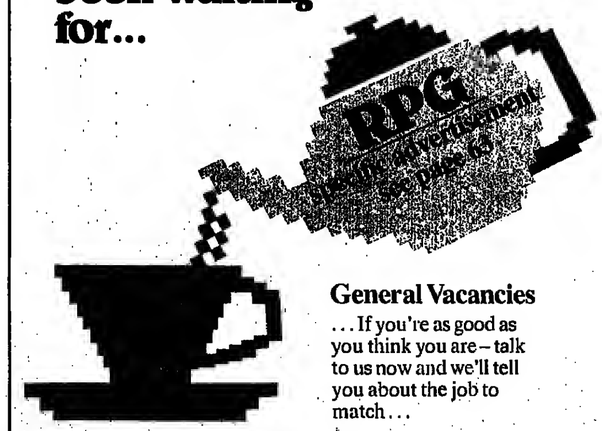

General Vacancies

... If you're as good as you think you are – talk to us now and we'll tell you about the job to match...

Cullen & Company
Suite 61, London House,
271/273 King Street, Hammersmith, London W6
01-741 8011 Ext 248

CONTRACTS

IBM

DOS/VSE PL/1 CICS PROGRAMMERS	– SURREY
DOS/VSE CICS/VSAM SYSTEMS PROGRAMMER	– LONDON/SURREY
SYSTEMS 38 MAAPICS PROGRAMMER	– SURREY
COBOL, TOTAL PROGRAMMERS	– SUSSEX
DOS/VSE COBOL CICS OL/1 PROGS. & ANAL. PROGS.	– SURREY
DOS/VSE IOMS & ADS – ONLINE COBOL ANAL./PROG.	– LONDON
MVS SYSTEMS PROGRAMMER (URGENT)	– SURREY
PL/1, VSAM, EASITRIEVE	– ESSEX

ICL

SYSTEM 25 DESIGNER	– BERKS
2900 VME COBOL IOMS AND/OR TPMS ANAL./PROGS.	– ALL AREAS
2900 VME COBOL TECHNICAL SUPPORT ANALYST	– MANCHESTER
2900 VME COBOL IOMS DESIGNERS & PROGRAMMERS	– MIDDX/BEDS/HERTS
2900 VME COBOL IOMS/TPMS SYSTEMS TRIALISTS	– MANCHESTER
ORS CIS COBOL PROGRAMMER	– BERKS
VME IOMS ANALYST	– OXFORD/READING LONDON
IOMS TPMS/ORS PROGRAMMERS/DESIGNERS	– LONDON
SENIOR TECHNICIAN PDS DOS VMEGSS GRAPHICS	– BERKS

OTHERS

HP 3000 COBOL PROG. & ANALYST/PROGRAMMERS	– SCOTLAND/BERKS
DATASAAB COBOL PROGRAMMER (24/10/83 START)	– MIDDX
TANDEM GUARDIAN DESIGNERS & PROGRAMMERS	– LONDON
SOFTWARE ENGINEER PLM/86 & ICE	– BUCKS
HARDWARE ENGINEERS (MICRO PROCESSOR TECHNIQUES)	– BERKS
INTEL MDS ASSEMBLER PROGRAMMERS	– SUSSEX
ANY CTL (ALL LEVELS)	– HERTS
VAX VMS SYSTEL PROGRAMMER	– SURREY
TECHNICAL & SCIENTIFIC PROGS. & ANAL./PROGS.	– ALL AREAS
REDIFON EDITOR VIEWDATA PROGRAMMER	– SURREY
UNIVAC 1100, COBOL	– ESSEX

OVERSEAS

ANALYST/PROGRAMMERS WITH RADAR/MISSILE/COMMS. EXPERIENCE	
PDP RSX MACRO 11 (MESSAGE SWITCHING)	– NEW YORK

Contact Lorreine, Lynna, Wendy or Tony on 01-948 5922 (weekdays) or contact Lorreine on Welton-on-Thames 245552 (evening and weekends).

PERMANENT POSITIONS

IBM COBOL, CICS PROGRAMMER	– SUSSEX	NEG+PERKS
VAX COBOL, DBMS PROGRAMMER	– SURREY	NEG
SOFTWARE ENGINEER WITH ASSEMBLER	– SURREY	£9-£13,000
IBM SYSTEMS ANALYST	– MIDDLESEX	£13,000
DOS/VSE, CICS ANALYST/PROGRAMMER	– MIDDLESEX	£12,500
DOS/VSE, CICS OPERATIONS SUPPORT	– MIDDLESEX	£12,000
IBM PROJECT LEADER	– MIDDLESEX	c£16,500
MVS SYSTEMS CONSULTANT	– BERKS	£18,000
IBM COBOL/ASSEMBLER PROGRAMMERS	– CITY	TO £13,000
RPG III PROGRAMMER	– N. LONDON	TO £13,000
PDP 11/70 COBOL PROGRAMMER/ANALYST	– CITY	TO £13,000
RPG II/III PROGRAMMERS	– CITY	TO £12,000
CAPACITY PLANNER	– CITY	c£17,000

Contact David Meson Johne or Peter Hennasey at KPG on 01-948 5922 or contact David on 01-747 0969 in the evening/weekends.

SEE US AT STAND V202 AT COMPEC

KPG
01-948 5922
KPG Computer Support Services Limited
Cobden House, Park Lane, Richmond, Surrey, TW9 2RA

(6104)

Computer Consultants & Personnel Services

TASK FORCE

(0782) 410217
44 Kingsway, Stoke-on-Trent, Staffs ST4 1JH

LONDON
GIII COBOL PROGRAMMER
ASAP/3 MONTHS

SOUTH WALES
VME SCL WRITERS
NOV/6 MONTHS

IDMS SUPPORT
NOV/3 MONTHS +

VME OPERATORS
ASAP/4 MONTHS +

16134

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If you have an interest in internetionel financial markets end would like to sell solutions to the mejor treding end brokerege houses in the U.K. end Europe you should contect us.
Our compeny merkets reel-time treding informetion syatems end work stetions end requires creative solution orienteted Account Manegers.
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LONDON WC1V 7NL

MARSTON'S

requires a
COMPUTER PROGRAMMER
at their Burton upon Trent Office

The company operats a Burroughs B6900 mainframe, which supports a network of 30 terminals. Applicants should have at least two years' COBOL programming experience, plus a sound knowledge of DMS and transaction programming in general.

The successful applicant will require to be resident in the Burton upon Trent area.

Salary c.£9,000 (negotiable)

Applications in the first instance, with c.v., should be forwarded to:

The Secretary, Marston, Thompson & Evershed p.l.c.
P.O. Box 26, Shobnall Road
Burton upon Trent, Staffs. DE14 2BW
to arrive not later than the 1st November, 1983

16080

Pafec requires sales executives, support and development engineers. Due to rapid expansion Pafec Ltd requires more staff to sell and install their popular products.

SALES EXECUTIVES

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£20,000 on target, plus car and fringe benefits. Needs to be experienced in computer sales, preferably CAD.

Support and development engineers.

Preferably with experience in computer graphics and an honours degree in any branch of engineering.
Salary negotiable, dependent on experience, but up to £10,000

Pleasant location, BUPA cover, pension scheme.

Apply in writing with C.V. to:

John Nicoll, Pafec Ltd, Strelley Hall, Main Street, Strelley, Nottingham NG8 6PE

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16128

Six of the best...

PLUS many more. Enter your skills and career objectives onto our computer system and they will be matched against current and future vacancies.
Interested? Then phone or return the coupon without delay.

IBM PL1 IDMS Analyst Programmer

Brussels **c £24,000**

Our client is a major organisation responsible for the safety of air navigation in European air space and we are currently supplying a team of people to the same project.

We are seeking an experienced PL1 IDMS Analyst/Programmer to work on an IBM 4341 using TSO/SPF and MVS at our client's site in the centre of Brussels.

The Analyst/Programmer selected will have a minimum of 3 years PL1 experience with 1 years IDMS and a willingness to work in a team environment.

If you are interested in this 1 year renewable assignment please telephone Knight on 01-491 4706 quoting ref EB001. Alternatively at evenings and weekends please telephone 01-840 1169.

Knight
Confidential Reply

Ambitious Analyst Programmer

Hampshire **c £11,000+ relocation and mortgage subsidy**

Diners Club International is a prestigious charge card company. Plans are already underway for a major development programme to incorporate new and exciting project areas onto their database management systems.

Their computer installation comprises an IBM 4341 running under MVS using TSO/SPF and CICS with the proposed implementation of DL1. In order to meet the demands of this area of expansion, Diners Club is seeking an energetic professional who can demonstrate the following qualities:

* **IBM Cobol**
* **TSO/SPF**
* **CICS**
* **Good Communicator**

The successful candidate can expect an excellent career path with this progressive organisation in addition to an outstanding benefits package.

Find out more – contact Knight on 01-491 4706 quoting ref GK608.

DINERS CLUB INTERNATIONAL

Analyst/Programmer

Croydon, Surrey **to £10,000**

Twinlock Limited is an international company involved with the design and manufacture of office systems and ancillary equipment.

Their computer services division currently runs three DEC PDP 11's supporting a network in excess of eighty terminals.

In order to meet the increasing development in computing within their group our client is seeking an Analyst/Programmer with the following skills:

* **Basic +**
* **RSTS/E**
* **Experience in a commercial environment**

You will be offered excellent career development opportunities, a competitive salary in line with your experience and abilities plus a wide range of benefits associated with an international group.

Find out more – contact Knight on 01-491 4706 quoting ref GK609.

Twinlock

Business Analyst (Office Automation)

West London **c £13,000**

Our client is a leading manufacturer of office automation computers and systems. Their continuing expansion has created the need for a Business Analyst. This position carries responsibility for the wide spread implementation of office automation throughout the company. It will entail close liaison with various user departments to identify their business and information processing needs and the ability to recommend and implement approved solutions.

Essential Requirements

* **Three years + computer experience**
* **Strong analytical and technical skills**
* **Project Management experience**
* ***Cobol programming background***
* ***Commercial DP and WP systems understanding***
* **Personal liaison skills**
* **Understanding of networking/comms.**

In addition to competitive merit-based salaries a comprehensive benefits package is included.

Interested? – contact Knight on 01-491 4706 quoting ref RC 321.

Knight
Confidential Reply

IBM Senior Systems Programmer

City **to £17,000 package**

We have been retained by an International Banking organisation with offices located in the major business centres of the world.

The London Data Processing Centre houses IBM 4300's running under VM/SP DOS/VSE using CICS/DL1 and VSAM. The technical support group is responsible for the planning, evaluation and implementation of all hardware and software.

Our client is seeking an additional Senior Systems Programmer to carry out the production, development and support of all OEM and systems software packages to UK and overseas branches.

Candidates must be prepared to travel abroad for short periods and should have 4-5 years experience which should include the following skills:

* **IBM Assembler**
* **DOS/VSE**
* **CICS, VSAM**

Successful candidates will be offered an excellent salary and benefits package which will include low interest mortgage and loans, free Life Assurance, free lunches, profit sharing plus many more.

Find out more – contact Knight on 01-491 4706 quoting ref YY201.

Knight
Confidential Reply

Graduate Programmers

to £11,000

Our client is a well-established international Management Consultancy with a vast customer base which includes industrial, commercial and government organisations.

To continue their policy of expansion, our client is seeking a number of Programming staff.

Candidates should be graduates and able to demonstrate experience in the following areas.

* **Large mini or mainframe experience**
* **18 months + COBOL or RPG2/3**
* **User liaison**

The successful candidate will be working in a team developing new and exciting commercial applications.

For those who are interested in International travel, our client will present the opportunity to work at customer sites abroad.

Find out more – contact Knight on 01-491 4706 quoting ref YY200.

Knight
Confidential Reply

Knight
01-491 4706
24 Hours
Knight Computer Services Ltd
14 Old Park Lane, London W1Y 4NL
PART OF THE HUNTERSKILL GROUP

Return to:- (no stamp required)
Knight Computer Services Limited, Recruitment Division, Free Post 16, W1E 6JZ.

Name
Address
Tel no (Home) Work
Position Sought
Ref no.

NORTHGATE COMPUTER SERVICES LTD

Is an autonomous subsidiary of a City stockbroker who specialise in providing a complete DP service to the financial and commercial sector. Long term commitments to develop DATABASE systems have created openings in both their business and education departments.

Successful candidates are required to work on ADVANCED 4TH GENERATION SOFTWARE TOOLS and DEVELOPMENT TECHNIQUES

Experience of one of the following would be beneficial:–
DATABASE DESIGN, PICK, ALL, LINC, FOCUS, RAPID, CUPID, MANTIS, MAPPER or any other ADVANCED DEVELOPMENT TOOLS

NORTHGATE ALREADY PROVIDE:–

★ TRAINING COURSES AT ALL LEVELS ON:–
★ 4TH GENERATION TECHNIQUES
★ "ALL", PRO IV, BASIC, PICK

PLACES ARE AVAILABLE FROM DECEMBER 1983

CITY BASED

SENIOR SYSTEMS ANALYSTS/ PROJECT MANAGERS
£12,000 – £16,000
+ BONUS
Ref No: 7100

TRAINER ANALYSTS
£10,000 – £14,000
+ BONUS
Ref No: 7101

For further information on opportunities and courses, please contact their Advising Consultant SHIRLEY FRANCIS quoting ref. number on 01-499 7761 during office hours or 0638 751564 between 7-9 p.m.

Lloyd Chapman Associates
123, New Bond Street, London W1Y 0HR 01-499 7761

(6041)

YOUNG PROGRAMMER
CITY to £8½K

As a leading member of the Stock Exchange, our client must continually develop its information systems. They already have an On-line system on the floor of the Stock Exchange and have recently upgraded their hardware to dual CTL8066s to support international trading.

To strengthen the existing team they require a COBOL Programmer with 12 months' commercial experience. Knowledge of CORAL, on-line techniques, and of course CTL are an advantage, but not essential. Personality is important; you must be lucid, articulate and a quick learner.

In addition to a salary in the range of £7½ to £8½K, plus benefits, you will have every opportunity to develop your technical skills and systems experience as a key member of a small DP team.

For further information, contact Jeff Boston on 01-930 4041 or Home: 078087 428.

Fraser Williams
Recruitment & Training
19 Charing Cross Road, London WC2H 0ES

(6118)

UNIVERSITY OF CAMBRIDGE
SYSTEMS ANALYST/ PROGRAMMER

Applications are invited from suitably experienced candidates for the above post in the Administrative Data Processing Section. The section provides Student Records, Accounting and Payroll services, both batch and on-line and is presently equipped with an ICL 2904/50 though enhancement is being considered. Applicants must have considerable programming experience in COBOL and experience in on-line systems. A knowledge of ICL computers would be an advantage.

The person appointed will, in the first instance, be responsible for the development, implementation and thereafter the maintenance, of a new Student Records system and experience of University procedures may be helpful.

Salary will be in accordance with Computer Officer Grade II – £8,976 p.a. to £12,546 p.a.

Applicants should forward details of their career to date, their age, present salary and the names and addresses of two referees, in confidence to: The Treasurer, University Financial Board, The Old Schools, Cambridge CB2 1TS, to arrive not later than 6th November, 1983.

(6078)

ASHTON-TATE

dBASE II

SOFTWARE TECHNICAL SUPPORT

dBASE II

Industry leader in Micro Database Software requires an experienced dBASE II programmer to support users, developers and in house programs. It would be an advantage if you have:

★ Experience of CP/M, Assembler & Basic
★ Experience of Hardware/Interfacing on micros
★ A love of your work

Growing at the speed we are – 150,000 users – your career development will be extensive. Planned activities include software evaluation, micro evaluation and allied activities.

Excellent starting package

Please reply in writing with full c.v. to:

Ian Turnar
ASHTON-TATE (UK) LIMITED
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Stony Stretford
Milton Keynes MK11 1BY

(6172)

ICL CONTRACT ASSIGNMENTS

P-E Computer Services Limited, a long-established and highly successful software house, has for many years supplemented its own staff resources with freelance professionals.

We currently have a large number of requirements throughout the UK for freelancers with ICL experience who are available between now and the end of the year. The following skills are of particular interest:

1900 COBOL G3 DME
ME29 IDMS and/or TME TP
2900 COBOL VME/B
IDMS and/or TPMS at all levels

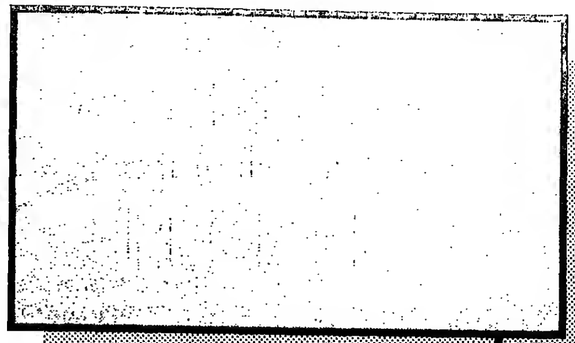
Whether you are available now, in the near future, or are considering freelance work for the first time, plan your freelance career by telephoning Peter Moore or Kerry Nash at the following locations:

Peter Moore
P-E Computer Services Limited
Winchester House
Fountain Street
Manchester M2 2EF
Tel: 061-228 2776

Kerry Nash
P-E Computer Services Limited
Park House
Egham
Surrey TW20 0HW
Tel: 0784 34411

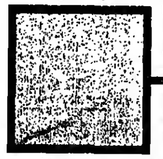
PE

(6126)



Come along to Tower House, 40 Trinity Square, E.C.3. (right next to Tower Hill tube), on Tuesday 25th October and get the complete picture of a career with Bowring Information and Communications Systems Limited (BICS).

Bowring is part of Marsh & McLennan Companies Inc., the largest insurance broking organisation in the world. Our three broking companies in the UK cover all types of insurance risk from undersea exploration, marine and shipping business to construction, aviation and space projects.



BICS is a wholly owned subsidiary working exclusively for the group, providing a total computing, communications and information service centred on a 12 megabyte Amdahl using MVS.

With our commitment to develop and support the most advanced information processing systems, we are offering the chance for the following professionals to join us in a variety of DP roles. So, we invite you to come along and meet us face to face. We'll tell you more about the company, the jobs, our in-house staff training and performance assessment philosophies which will allow you to grow with us and develop your career in an informal yet highly professional environment. It will also give us the chance to learn a little about you and your suitability for one of these roles:

ANALYST/ PROGRAMMER – User Information Services c.£11,000
Three years' DP experience using End-User "tools". Should also have experience of personal computers and PL/1 or COBOL with IMS.

SENIOR SYSTEMS PROGRAMMER – Network Management up to £16,000
Three years' IBM software experience with ACF/NCP; ACF/VTAM; MVS; IMS/CICS; and up to two years in Networking.

ANALYST/PROGRAMMER – Internal Audit up to £11,000
Three years' COBOL programming on commercial applications, two plus years' systems design, ideally in Insurance. Knowledge of minis and micros.

ANALYST/PROGRAMMER – Development and Support up to £11,000
Three years' COBOL programming; some systems analysis in Insurance; familiarity with minis. Knowledge of Computer Automation equipment.

SYSTEMS PROGRAMMER – Technical Support Group c.£13,000
Two years' experience of Assembler and Installing/ maintaining MVS. Useful to have experience of any of the following: MVS/SP1.3; TSO; ROSCOE; APL and related products; ACF/VTAM.

SYSTEMS AUDITOR – Systems Integrity Unit up to £11,500
Three plus years as Analyst/Programmer; some experience of Quality Assurance. Good communication skills.

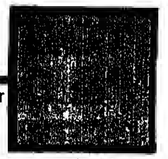
DATABASE ANALYST – Data Administration c.£13,000
Five plus years in DP of which two should be in Data Base admin. Experience of commercial applications plus IMS, PL/1 and CICS, database design.

STANDARDS CO-ORDINATOR c.£10,000
Overall experience of DP, admin capability, good communication skills.

SYSTEMS ANALYST – Development and Support up to £14,000
Must have experience in Insurance Industry; familiarity with IBM Data Base; CICS; PL/1 or COBOL.

TRAINING ADMINISTRATOR c.£8,000
Good knowledge and understanding of DP; teaching/lecturing skills; good organising ability.

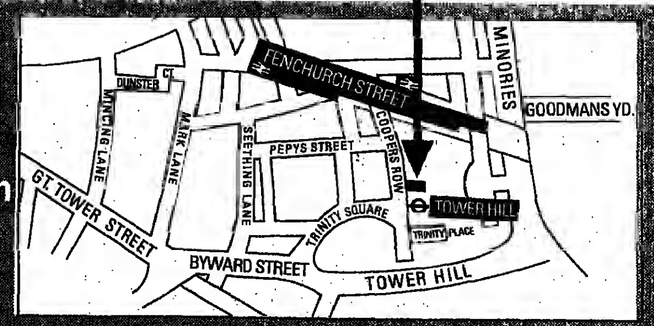
If you're in your mid twenties to early thirties, educated to at least 'A' level or degree standard, with the relevant experience identified in these brief outlines, you could have a real career future with Bowring.



Naturally, we'll be waiting to tell you all about our excellent salaries, bonus schemes and generous fringe benefits.

If you are interested in any of these vacancies, but are unable to come along to the informal interview please write with full career details to Jenny Massey, Recruitment Manager, C.T. Bowring & Co. Limited, The Bowring Building, Tower Place, London, EC3P 3BE, or telephone 01-283 3100 ext 2105.

On Tuesday 25th October
meet us at
TOWER HOUSE
40 TRINITY SQUARE, EC3
between 5.30pm and 9.00pm
(Refreshments will be available)



Bowring

A member of Marsh McLennan Companies Inc.

Our Client are a leading manufacturer of 16 bit multi-user systems, with a comprehensive and highly successful range of hardware, complemented by an extensive range of vertical market software. They have recently moved their European Headquarters to the Thames Valley, and as a result of this transition are looking to employ a

EUROPEAN SALES MANAGER

circa £30K + Car

This is a key position within the company and responsibilities will include, establishing and monitoring major accounts and distribution outlets throughout Europe. This includes total responsibility for all revenues within the region.

Ideally, applicants will be technically competent, have a strong business background and be conversant with another European language.

Preference will be given to applicants already in a similar role, with experience of selling minis or related hardware products in the European market place.

In return the company offers an exciting opportunity to play a major role in one of the most successful and rapidly expanding high technology companies in Europe.

Benefits will include high base salary, prestige company car and free BUPA membership.

The real benefits derive from working for a growing company which is already one of the outstanding successes of the 1980's.

For further details telephone Barbara Alen at our Reading office. (6128)

MCL — McCOURT COUSINS LTD.

27-29 Greyfriars Road, Reading, Berkshire. Telephone (0734) 595346 (24 hours)

Chasham House, 150 Regent Street, London W1R 5FA. Telephone 01-439 6288

OPERATIONS STAFF

Saudi Arabia — Tax Free

Our client, a well established company now requires the following staff:-

HEAD OF OPERATIONS (Ref. S2190)	c £18,500
SHIFT LEADER (Ref. S2191)	c £15,000
CONSOLE OPERATOR (Ref. S2192)	c £13,000

Candidates for these positions should have at least 3 years experience in a similar role with knowledge of IBM/DOS VS(E), real time systems using CICS, VTAM and NCCF.

Our client is offering a single status contract with good terms and conditions.

Please write or telephone quoting the relevant Ref. No., Lansdowne International Limited, Lansdowne House, 36 Great Smith Street, Westminster, London SW1P 3BU.

01-222 3264 (24 hours)

Lansdowne INTERNATIONAL RECRUITMENT CONSULTANTS

POLYTECHNIC OF THE SOUTH BANK
Borough Road, London SE1 0AA

MANAGER INFORMATION TECHNOLOGY CENTRE

Salary up to £14,000 p.a.
(Reolvartisomaut)

The POLYTECHNIC OF THE SOUTH BANK in association with the BOROUGH OF WANDSWORTH is proposing to sponsor, subject to the formal approval of the MSC (under the YTS Scheme), an Information Technology Centre at Manor House, Clapham Common. The Centre will provide work experience and training for young people in microprocessor and computer applications.

We are seeking a person with appropriate management experience and with knowledge of relevant production and marketing techniques to manage the Centre. The initial appointment would be for a period of 15 months with the possibility of further extension.

Application forms and further particulars are available from the Polytechnic Staffing Office. Tel: 01-928 8989 ext. 2358.

Completed application forms to be returned to the Staffing Office no later than October 25th, 1983. (6210)

Technical Sales Support

Project Management with a Difference

£15K–£19K + car

If you're in project management or a project leader, here's a chance to develop your career in a new and exciting direction.

Data Logic, the top service and systems people, are part of the Raytheon Multinational Group, one of the largest high technology corporations in the world. Our rapid expansion is building success upon success and has created an extensive quality customer base with a variety of interesting and exciting projects. Our growth and attainment of new, major projects in our professional services division has created a need for highly qualified technical support consultants to back up our direct sales teams.

You will be aged 30-45, educated to graduate level and must have had at least 10 years experience in a computer software services environment. You must have a wide experience of applications, hardware and operating systems and we would expect you to be able to cope with projects varying from large mainframe user operations through to micro-networks and distributed systems.

It's an exciting opportunity for people who are tired of being stuck in the same old rut, day after day. We will offer you variety, challenge and a real opportunity to work at the forefront of technology together with a career path that is second to none.

In return for your commitment, we offer a highly attractive salary, company car, BUPA and other benefits you would expect from a major company. The position is based in Greenford.

To apply, please send a full c.v. to: **John Burr, Sales Support Manager, Data Logic Ltd., West Way House, 320 Ruislip Road East, Greenford, Middx. UB6 9BH. Or telephone him on 01-578 9111.**

(6117)

Data Logic career opportunities

The top service and systems people

logistix — Logistix Recruitment Limited, 10 Grenville Place, London SW7 4RW

Telephone 01-373 3063

Artificial Intelligence

Thames Valley: Salaries to £14K

Our Client's Research Centre, established in 1978, has recently taken additional premises in the Reading area. An immediate requirement exists for personnel to participate in the development of the Company's range of products and services. You are probably engaged as a Systems Programmer, Designer or Consultant and have a minimum of B.Sc. degree in a numerate subject. Those who hold an M.Sc or Ph.D. are encouraged to apply if they can combine an academic background with some relevant industrial or commercial experience. The Company's specialist areas of activity demand that all potential employees have an in-depth knowledge of two or more of: artificial intelligence, cybernetics, knowledge engineering, robotics, process and control engineering.

Ref: L/36/A

'C' & UNIX Programmers

London: Salaries to £10K

A highly respected Product Supplier is currently seeking to recruit several Systems and Applications Programmers to work on its UNIX-based range of products. Applicants, aged 22-26 years, should have graduated since 1980 with a good class honours degree in a numerate subject and have at least one years commercial or industrial experience. Very recent M.Sc or Ph.D. candidates are also encouraged to apply particularly if their chosen subject matter was directly concerned with UNIX systems software. It is advantageous to be fluent in 'C' programming language and also offer PASCAL as a secondary language.

Ref: L/36/B

Firmware Programmers

Home Counties: Salaries to £11K

A small but rapidly expanding company has a number of vacancies for Firmware Programmers/Designers to join its product development group. Acting as the external development department for many of the leading names in the industry, the company is able to offer a wide range of hardware and software involvement. Suitable applicants will be graduates with a B.Sc. or M.Sc. in Electronic Engineering or Computer Science. It is essential that you offer fluency in Micro Assembler with additional knowledge of a block structured language such as Pascal or 'C', being desirable. Mostly based in-house you will be involved in the development of intelligent terminals, data capture equipment, multi-micro communications processors or ATE software.

Ref: L/36/C

RSX/VMS Progs

London & H Counties: Salaries to £13K

The Communications Division of a leading Systems Supplier and Consultancy is currently seeking additional Systems Programmers. Suitable applicants should be graduates with a minimum of two years software or systems design experience within a PDP/RSX-11M or VAX/VMS environment. It is essential that you should offer fluency in Assembler and that you are fully familiar with the internals of RSX-11M or VMS. Additional knowledge of a high level language e.g. FORTRAN or PASCAL would be a distinct advantage, as would experience of working within a data communications or distributed processing environment. Applicants who demonstrate management potential or those who already have some project leading experience will be considered for more senior positions within the project teams.

Ref: L/36/D

Micro Development

Central London: Salaries to £15K

A leading Systems Supplier and Consultancy currently requires a number of Project Leaders, Applications and Systems Programmers. Suitable applicants should be educated to B.Sc. level and have a minimum of one year's subsequent industrial experience in a microprocessor based environment. Of particular interest, will be applicants who have some knowledge of Intel microprocessors using PL/M as a principal programming language and having PASCAL as a secondary language. For certain positions, it is mandatory to have an in-depth knowledge of Intel's RMX operating systems and development tools. However, candidates who are familiar with other microprocessor systems will certainly be considered.

Ref: L/36/E

Systems Engineers

Herts/Beds: Salaries to £13K

The Hardware and Systems Group of a leading computer manufacturer has a number of vacancies for Senior Systems Engineers. A good degree in Electronics or Electrical Engineering, supplemented by 4/5 years industrial experience, are minimum requirements. Additionally, successful candidates will be required to have project management experience or potential and an ability to work under stress conditions. The main area of responsibility will be the design and implementation of terminal equipment interfacing to Local and Wide Area Communications Networks. Practical experience in this field will be especially welcome, as will knowledge of bit-slice processors.

Ref: L/36/F

Real-Time Programmers

Central London: Salaries to £11K

A leading Systems House and Consultancy is seeking to recruit additional Real-Time Programmers for its Central London Head-Office. Suitable candidates should be graduates with at least 12 months subsequent programming experience in a real-time scientific environment. It is essential that you offer fluency in at least one of the following: PASCAL; 'C'; FORTRAN; ADA; CORAL-66 or Assembler. Hardware experience is less important, but preference will be given to applicants who have recently worked in a development role on PDP-11/VAX; Intel 8080/8 or Motorola 6800/68000.

Ref: L/36/G

Signal Processing

S. Home Counties: Salaries to £14K

Our client, one of the leading UK Systems and Software Houses has a number of vacancies for Signal Processing Specialists to join either the Central London or Surrey based offices. Applicants should be graduates in a scientific discipline and have subsequently gained at least two years experience in an industrial or defence environment developing software for signal processing applications. Those who have current or very recent experience with Floating Point Systems array processors are particularly encouraged to apply.

Ref: L/36/H

(6101)

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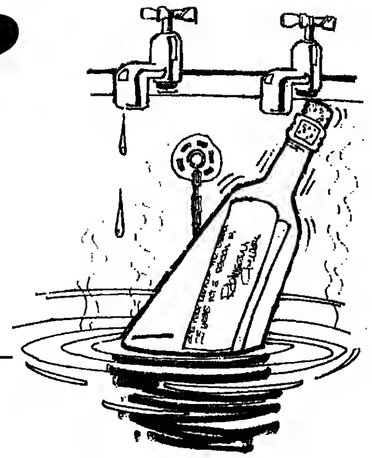

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	Ref:
ADF Programmers	DL 101
CDRAL 66, all levels	SC/S8 150
DATA GENERAL Business Basic	SB 180
DATAPOINT Datashare Databus Prog/Analyst	SC 104
EPS Consultants	CW 182
GEC Babbage and Viewdata Progs.	SC 166
Hardware/Software Engineers	SC 109
Honeywell GCOS, IDS, TDS, COBOL	DB 110
Honeywell L8 GCOS, TPS Tech Support or Systems Progs. URGENT!	DB 162
Honeywell L6 GCOS, Screenwriter or COBOL Progs.	DB/SB 192
HP 3000 COBOL with RAPID Progs.	PH 172
HP 3000 Analyst	KC 181
IBM Assembler Progs.	KC/SC 186
IBM Adabas, Natural Progs.	DL 156
IBM 8100 DPCX or DPPX	SB 115
IBM PL1 with JSP	DP 116
IBM PL1, Adabas	DL 118
IBM IMS DB/DC COBOL & JSP Progs.	PH 158
IBM COBOL IMS DB/DC	DB/DL 120
IBM Series 1 RPS Assembler	PH 191
IBM DDS/VSE CICS Systems Progs.	SC 187
IBM JES 3 Systems Prog.	DB 193

URGENT
IBM COBOL CICS DL1 Progs. SC/DL/PH 121
IBM DS MVS COBOL + ICL GIII COBOL CW 190

IBM NOMAD	SB 122
IBM System 38 RPG III Prog. with MAAPICS	SB 183
IBM System 38 RPG III	SC 127
IBM MANTIS Progs.	PH 169
ICL IDMS Analyst with Inventory Control	PH 163
ICL IDMS Database Analyst	CW 164
ICL IDMS Systems Prog./Designer	CW 130
ICL Systems 25 Designer and Progs.	CW 133
ICL VME8 IDMS, COBOL, all levels some with TPMS	PH/CW 134
ICL VME8 COBOL with SCL	PH 136
ICL ME 29 TME COBOL Progs.	SC 188
INTEL8086 Programmers with PLM	DL 137
MICROBASIC Prog.	CW 195
PDP RSX or RSTS/E Systems Prog.	CW 171
PDP RTII and DIBOL Progs.	SC 139
REDIFON Viewdata Prog.	DL 194
SAS Consultant	CW 179
SYSTEMS ANALYSTS with User Liaison and pref. ICL DRS/Word Processing	PH 185
TANDEM Analyst/Progs.	PH 184
UNIVAC 1100 COBOL	SC 154
VAX VMS Systems Prog.	CW 170
WANG RPG II Prog.	CW 189

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IBM COBOL CICS Senior Analyst
IBM PL1 IMS Progs.
ICL DRS CIS COBOL Progs.
ICL ME29 Progs.
ICL VME8 IDMS/TPMS Progs.
IBM MVS Operators
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PERMANENT

IBM COBOL An/Prog. with three years' exp.	Ref. DP 680
Honeywell DPS4/DBS7 A/P with IDS and/or TDS	Ref. NS 681
Mini Operations Manager/Prog.	Ref. DP 682
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JOBS IN RETAIL

Prospects are rosy in big stores' departments

'One of the safest, most secure ways of earning a living' says Mike Sawyer

MOST large retail chains would agree that a job in retail data processing is one of the safest, most secure ways of earning a living.

But unlike the Civil Service, which offers equally secure employment but a generally lower standard of pay, the retail sector offers salaries which put employees among the top 20% of DP wage earners.

And perhaps more importantly, a job in retail DP offers the chance of working in a progressive and forward-thinking environment, using the latest techniques and technology.

Competition among retail chains is fierce and retail offers challenges in systems development and a chance to develop skills and use initiative sometimes sadly lacking in other industries.

All the major retail chains contacted for this survey, Tesco, Boots, Dixons Photographic and Fine Fare are either hiring DP staff now or will be shortly.

Recruitment into retail DP has hardly been affected by the recession compared to other sectors of industry and now major new projects and re-organisation is scheduled for some of the above sites.

The competition between retail chains, as the economy picks up, is likely to become fiercer. Consequently, the chains are going to ask a lot of their DP departments, especially with the onset of new electronic product handling technology.

And as a result of this demand, career opportunities should be enhanced because retail DP is all about changing with the times, bringing in new systems ahead of the competition and gaining that extra edge.

Such is the strength of the retail market that the chains, having stood up well to the rigours of recession, are now looking to expand.

Major chains like Tesco and Sainsbury's recruit DP staff in hundreds. Sainsbury's for example was recently looking for staff to implement the introduction of a new systems development methodology and new technical standards.

Career opportunities should be enhanced due to fierce competition between the chains — and retail DP is all about changing with the times

Tesco has around 550 DP staff and in a department that size there are always opportunities. The company is currently looking for around 20 staff to fill vacancies at its Hertfordshire installations.

Working either at the Cheshunt or Welwyn Garden City DP sites, the new staff intake will have the choice of living in London and commuting, or of moving into Hertfordshire.

Tesco is looking for senior programmers, analyst programmers and systems analysts skilled in Cobol to work on the group IBM 3081s using OS/VS, MVS and JES 2 operating systems.

Closer to London, Dixons Photographic, like Tesco, is undergoing reorganisation and is restructuring its DP department.

More staff will be required to launch a series of new developments designed to meet the future needs of the group.

Christine Dutson, speaking for Dixons, said the group plans to hire two or three DP staff from systems analyst level upwards. There is also the possibility of another systems manager being taken on.

Dixons is an ICL 2960 site using ICL VME. The new recruits must be experienced. They are to work with Dixons' systems development team based in Edgware, Middlesex and should have, according to Duston, "a good understanding of business and proven ability".

Both Tesco and Dixons requirements are for career-minded staff. Both sites, with expansion plans, offer challenges to new staff who can benefit from being at the sharp end of the business world.

One company that knows a lot about being at the sharp end is Boots.

An IBM site based in Nottingham, Boots DP department has had to grow quickly to match the rapid expansion of the chain which can now claim to be one of the leading retail chains in the UK.

The department currently has vacancies for two or three experienced programmers and systems analysts.

Salaries for systems programming people are up to £10,500 and the company offers a relocation package.

Staff in the DP department work with IBM 3081D and 3032 mainframes using MVS, JES, Roscve and DL/I as standard operating systems and CICS, ACF/VTAM and NCP in an SNA network.

Mainframe personal computing work is also undertaken at the site using VSPC, APL and ADRS, and the department is planning to implement IBM's latest operating system MVS/XA.

In line with the other retail chains contacted, the Fine Fare group is also looking for staff to join its DP department at Welwyn Garden City.

But unlike other sites, Fine Fare is a Burroughs outfit with a fairly extensive collection of DEC PDP/11 minicomputers as well.

"We have a number of vacancies for programmers, analyst programmers and systems analysts," said Fine Fare DP manager Mike Bradley. "Our DP department has been growing for years and this growth is continuing.

"The group trades under the names Fine Fare and Shoppers' Paradise, both of which operate under a full electronic stock control system. Salaries are good.

Few jobs available in the DP sector offer chances to work in such a go-ahead environment

In retailing, the salary levels are not market leaders but we are up with the top 20% of firms.

Like a lot of Burroughs sites, competition for staff from IBM and ICL users, there is a shortage of Burroughs-trained staff.

However, those hired direct into the firm with three years' plus experience would need to know Cobol to work on the Burroughs machines, and to know Basic +2 for the DEC machines.

With the stiff competition between the retail majors, companies are going to seek more efficient ways of handling their goods and consequently are going to become more reliant on DP technology, a development which can only strengthen the importance of commercial DP and by extension, the importance and value of DP staff.

Compared to other sectors of industry, recruitment into retail DP has still been affected by the recession.

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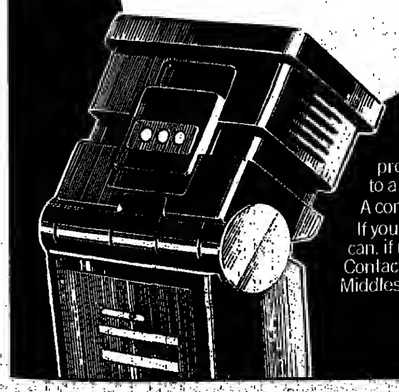
Contact Christine Dutson, Dixons Limited, Dixon House, 18-24 High Street, Edgware, Middlesex HA8 7EG. Telephone 01-952 2345.



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LOCATION: CITY **JA332/2**

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IBM 8100 DTMS DMS
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We should like to hear from all operators interested in the above opportunities in Scotland. Preference will be given to those already living North of the Border. Ref: KS/2028/CW

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MVS OPERATOR — MIDDX — £7.5k+
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[illegible] (8083)

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In addition to its normal circulation of 125,000+, THE BIGGEST CIRCULATION OF ANY UK COMPUTER PUBLICATION – this issue of Computer Weekly will be distributed from its stand at Compec '83 at Olympia on November 15-18.

COMPEC '83 is Britain's biggest computer exhibition. Last year it was attended by 32,000 key computer personnel. This year we're expecting even more! The November 10 issue of Computer Weekly will reach all these people! In the COMPUTER WEEKLY Recruitment & Education Supplement you will reach the maximum number of quality computer professionals. On every count, it's the No. 1 recruitment opportunity of 1983!

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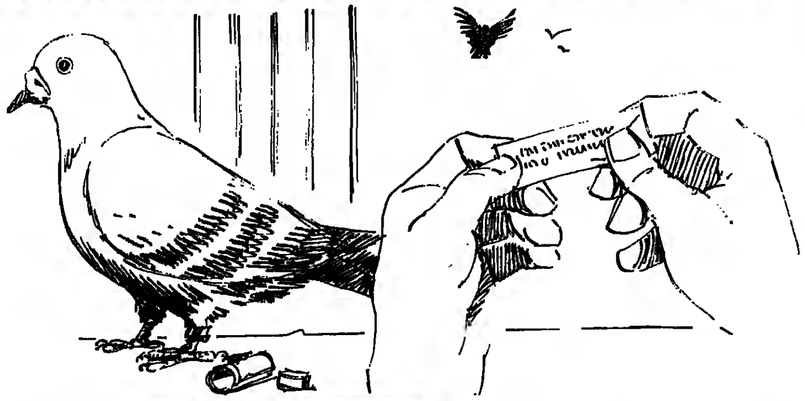

That can certainly be said of our client; a major Electronics Company who are recognised as leaders in the field of designing advanced communications systems. They have been operating at the forefront of technology, utilising the latest and most sophisticated combination of circuit, message and packet switching.

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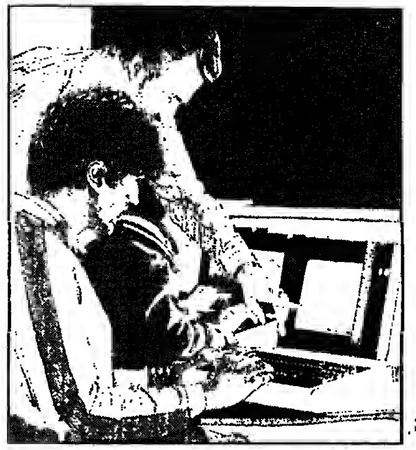
CENTRAL MILTON KEYNES MK9 2LR
TEL 0908 604848 TELEX 825264

Our client will be holding an open evening at the Britannia Hotel, Portland Street, Manchester on Thursday 27th October between 4.30 - 9.30pm. If you would like to attend please contact CTA.

CLASS OF '84



Right now you're working in computers, or already in a training environment. If so, our plans for expanding our training establishments at new locations in Reading will be of great interest to you.

It is an opportunity for making the most of your in-depth software experience or add new dimensions to your hardware knowledge and career while broadening your horizons at the leading edge of computer technology.

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You're probably aged between 25-35, with a degree in computer science or numerate discipline — but it's far more important for you to have a strong background of relevant experience. Naturally, you'll be a confident, outward-going person with an innate ability to teach, possessing a quick, alert mind that enables you to think on your feet.

For those who are looking for more job satisfaction in a computer environment, we are looking for training specialists in the following areas:

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Qualified people currently in Field Service, or existing electronics/computer instructors, looking for more career progression, perhaps you are a Digital Design Engineer having graduated 2-3 years ago.

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Qualified to Degree/HNC in electronics/computing with at least 2 years in the field working on computers. You may have had some training experience and are looking for career satisfaction passing on your skills to others.

CUSTOMER SOFTWARE

With at least 3 years' experience in programming or computer operations; perhaps currently an instructor in industry, or college teaching computing.

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With in-depth experience in data communications or commercial products and their applications. You could be a Software Specialist or working in a software sales support role, or even teaching in a computer company or College of Technology.

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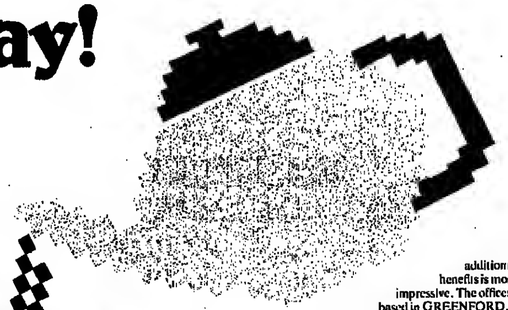
Please write or telephone for an application form and further information to: P. Harvey, Employee Relations Officer, Quinton Hazell plc, Lea Francis House, Kenilworth Road, Balsall Common, Coventry CV7 7DJ. Tel: (0676) 32533.

QH

(90880)

250 Million a Day!



... hard to believe, but we really do drink that many cups a day!

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They intend to build on their achievements and hope that by joining them now, you will build on yours.

The Company has used IBM GSD equipment for some years and present hardware consists of a SYSTEM 38 MODEL 7.

It is an impressive operation and to keep pace with the demand for fast and efficient business systems, a second SYSTEM 38 (7) is planned for later this year. The D.P. Department is an exceptionally effective unit enjoying the total support of their very enlightened users and the absolute confidence of Senior Management. Their function is to provide a comprehensive range of on-line systems serving the entire needs of the organisation.

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To cope with the continual demand for new systems, Lyons Tetley are now in a position to offer a SENIOR PROGRAMMER a quite exceptional career opportunity. Talent is the keyword. Although the development software is RPG III, the company is prepared to recruit an RPG II programmer anxious to move into a SYSTEM 38 environment and take advantage of a comprehensive training policy. This is, however, a senior appointment and requires the experience and skill to play a team-leading role in the planning and implementation of new systems. The successful applicant will be reliable, resourceful, and feel comfortable in a role with plenty of user contact.

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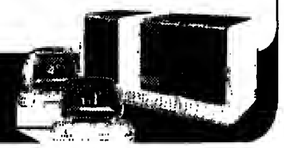
If you measure up to these standards, then develop your career with one of the fastest growing names in the computer industry — Data General. Please write with a full c.v. to John Cunnell, Personnel Manager, Data General Limited, Hounslow House, 724-734 London Road, Hounslow, Middlesex TW3 1PD, or ring for an application form on 01-572 7455.



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PROGRAMMER — C. LONDON — to £10,000
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Sys 34 RPG II	Anal/Progs	– Berks
Sys 38 RPG III	Analyst Prog Commercial	– Berks/Middx
IMS DC	Analyst Progs & Progs	– Midlands/South
8100 DPPX COBOL	Progs	– London/Midlands
COBOL CICS DL/I	Progs	– London/Midlands
COBOL CICS DL/I	Analyst/Progs	– West/South
DL/I Designer		– South
Analysts (Structured techniques)		– C. London
PL/I IMS DB/DC (Jackson)	Progs	– All areas
COBOL CICS DL/I	Progs & Anal/Progs	– Middle East
PL/I TSO SPF VSAM	Anal/Progs	– C. London
VM Graphics	Systems Prog.	– Middle East
VM Systems Programmer		– Home Counties

ICL Requirements

DRS 20	CIS COBOL FORMS II	Progs	– Home Counties
TPMS	IDMS COBOL	Anal/Progs	– All areas
ME29	TP/IDMS	Progs	– All areas
IDMS	Database Administrator		– Carribbean
TPMS	COBOL	Prog	– West
VME	Systems Programmers		– South Africa
VME	COBOL Progs (Jan 84 start)		– W. London
Comms	Network Designers		– W. London
IDMS	Database Administrator		– Herts
IDMS	TPMS COBOL	Progs & Designers	– C. London

Requirements on Minis & Micros

Prime Systems Programmer		– Northern England
Prime 650/250 COBOL	Anal/Prog	– C. London
Perkin Elmer (TP or DBase)	Systems Progs	– W. London
Intel 8086 Graphics	Progs	– South
DEC Comms Support Progs		– Surrey
VAX VMS COBOL Systems Designer		– Middlesex
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C Programmers		– All areas
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General Requirements

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Univac 1100 DMS 1100 COBOL		– London area
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CW20/10

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The Society offers a competitive salary plus an annual bonus. Other benefits include a non-contributory pension scheme, 20 days' holiday a year, a staff restaurant providing free lunches and the opportunity in the future to be considered for a staff house purchase loan at concessionary rates.

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Mrs. Carol A. Bird, Staff Assistant, The Equitable Life Assurance Society, Walton Street, AYLESBURY, Bucks HP21 7QW. Telephone: Aylesbury (0296) 33100.

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- *A minimum of 2 years commercial computing experience*
- *Proven programming skills (Pascal, BASIC or Assembler preferred)*
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COBOL Programmer

with DEC experience

Applicants must have a minimum of 5 years' COBOL programming experience on a DEC 10/20 computer. They must also have experience in macros, optimisation techniques and structured programming techniques, and will ideally be currently responsible for TOPS 10/20 maintenance in addition to general applications. Ref. B/1458/FY.

Candidates for both posts must be able to communicate effectively in both written and spoken English – knowledge of Arabic would be an advantage.

In addition to an attractive base salary, paid free of tax in Saudi Arabia, successful candidates will be offered an excellent benefits package which includes ★ performance and end-of-contract bonuses ★ free housing and utilities ★ leased car ★ generous leave provisions ★ free medical treatment ★ first class recreational facilities. Appointments on either single or married status will be for an initial period of two years, renewable by mutual agreement.

Interviews will be held in London in late November/early December.

Please reply, with full details, including current compensation level to B. G. Woodrow and clearly stating the position for which you are applying. These will be forwarded direct to our client. List separately organisations to whom your application may not be referred.

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The profile of the successful candidate (male or female) is likely to include:

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- ability to lead a small team, and the personality to liaise well with users and systems managers in different countries
- some knowledge of German, or the aptitude and willingness to learn

Initial interviews will be held in London, and short-listed candidates will be offered a visit to Germany before acceptance of employment.

Please ring us for an initial discussion in confidence, quoting ref. 220, or leave a message on our answering machine after hours.

160541

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[هكذا من الأصل]

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Major company wishes to recruit several self-motivated and experienced Systems Analysts to embark on a whole range of exciting projects. The positions offer genuine opportunities to those seeking to broaden their skills and work on state-of-the-art systems. For more details, please phone immediately quoting the reference below. Ref: T2178

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Our client, an international finance company retaining an IBM 3033 under MVS utilising TSO, ACF/VTAM, NCP & CICS, seeks to recruit an MVS Systems Programmer. You will be involved in the generation and maintenance of operating systems and associated utilities, reporting tools, access methods and communication programs. Candidates for this position should have 2 years'+ experience within systems programming together with a knowledge of Assembler and MVS. Superb benefits package. Ref: M2168

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The salary offered is up to £13,000 plus an excellent benefits package, including life assurance, contributory pension scheme and relocation expenses where appropriate. If you are ready for a real challenge then 'phone Ian Muir, Personnel Officer, on Staines 51188 or write to him at Newbury Data Recording Ltd., Hawthorne Road, The Causeway, Staines, Middlesex, TW18 3BJ.

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North-East London Polytechnic Computer Centre

Programmers (2 posts)

Vacancies exist for Programmers in the Computer Centre. Applicants are normally expected to possess a degree or equivalent qualification in a numerate discipline and have at least two years' programming experience.

A wide range of projects are undertaken in the Centre and include scientific, business and database applications. The facilities provided by the Centre are based on Prime computing equipment within the framework of a large scale time-sharing environment.

Successful applicants will be based at either the West Ham Precinct, Romford Road, London, E 15, or the Barking Precinct, Longbridge Road, Dagenham, Essex.

The inclusive annual salary will be on a scale from £9,857 to £11,136 according to age, qualifications and experience.

For further details and an application form, please contact the Personnel Office, Asta House, 156-164 High Road, Chadwell Heath, Romford, Essex. Telephone 01-590 7722, Extension 3121/3110, quoting reference number 15/E/83. Closing date for receipt of application forms: October 27, 1983.

NELP North East London Polytechnic

(5341)

OXFORD UNIVERSITY COMPUTING SERVICE

ADVISOR/USER LIAISON OFFICER/TECHNICAL AUTHOR

The Service runs an ICL 2988 and three VAX 11/780 computers. Oxford Users also have access to the CRAY 1S at ULCC and the Cyber 205 at UMRCC.

The Service requires an Advisory Programmer who will also specialise in documentation. Liaising with remote sites or teaching the use of local and remote computers may also be part of the post.

Salary from £6,310 to £14,125 per annum according to age and experience.

Further details and application forms may be obtained from Mrs Mesling, Computing Service, 13 Banbury Road, Oxford, OX2 6NN. Telephone (0865) 56721.

Closing date for applications is Friday November 11, 1983

(5809)

PROGRAMMERS

to £10,000 p.a.
Cambridgeshire

One of the world's leading chartered accountancies with offices in most countries and throughout the UK, seek to expand their national computer centre.

Their current requirement is for Programmers with a minimum of 12 months' practical, commercial experience using BASIC-PLUS, to work on accounting packages for external clients as well as in-house users. Their current hardware is based on PDP11 systems.

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Application forms may be obtained from:

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Level 64 COBOL — London
£8,000 to £13,000

We currently have 5 companies based in Central/Home Counties who are seeking Programmers and Analyst Programmers with experience of either IDS or TDS but applicants from purely batch environments will be retrained in on-line techniques.

DEC PDP 11 Programmers — South
£8,000 to £14,000

We have several clients in Central London and the Home Counties who require upwards of 12 months experience of BASIC+ or +2 (RSTS or RSX). Any experience of analysis work is welcomed at the more Senior levels and some Installations will retrain on the VAX machines, either in VAX BASIC or COBOL. Progress into analysis work and improve your career prospects.

IBM Junior Programmers — South
£7,000 to £10,000

If you have around 12 months or more experience of COBOL on any IBM mainframe then several companies in the London/Home Counties area would be interested in you. Progressive installations running ON-LINE/DATABASE systems (CICS, DL-1, IMS, ADABAS etc.) are seeking any experience of DOS or OS/MVS and will train successful applicants.

COBOL Programmers — London
£7,500 to £12,000

We have a well established Client who requires Programmers from Junior to fairly Senior level. Upwards of 12 months COBOL gained in any main frame or mini installation is required. The work is both varied and interesting and offers a genuine opportunity to work on new hardware (IBM, Honeywell, Tandem, Hewlett Packard, ICL, DEC) and learn new techniques.

Systems Analysts — London
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PL-1 — South
£9,000 to £13,000

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UNIVAC 1100 — Home Counties
£10,000 to £12,000

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ICL COBOL — London
£11,500

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HP 3000 — N/W London
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ICL — South
£8,000 to £12,000

We have several clients based London/Home Counties with requirements for Analysts and Programmers. A minimum of 12 months+COBOL on ICL 2900, 1900 or ME 29 hardware is required. Some positions carry excellent company benefits.

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(6102)

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Computer Search & Selection
(6120)

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PROGRAMMERS £9,500–£11,000

* CITY *

Our Client is the headquarters of one of the world's leading commodity-based trading groups, with diverse interests worldwide. A VAX 'Super Mini' running VMS has recently been installed on which a major development programme is to be developed and implemented. Beyond immediate project plans, the London headquarters will take a leading part in the co-ordination of existing and future systems located throughout the world.

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Analysts should possess a good business background with a minimum of two years solid analysis and design experience preferably on DEC or similar powerful mini computer systems.

Programmers should have a minimum of three years COBOL experience, including some exposure to VAX/COBOL technology. A knowledge of FMS and DATATRIEVE would be advantageous.

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To arrange an early interview for these immediate appointments, please contact **Renée Nute** on **01-935 0671** during office hours or **01-874 6372** evenings or weekends. Alternatively send your C.V. to her at the London Office address.

(6078)

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H Programming & Systems Ltd.

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HP 3000 RAPID	554 JM
TANDEM COBOL	552 NL
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ICL 2900 COBOL VME VMEB SCL	584 NL

ANALYST/PROGRAMMERS

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IBM System 38	380 SH
IBM 4341 COBOL ASSEMBLER DOS VSE Real-time SHADOWS	557 NL
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Z8000 PASCAL or 'C'	592 NL

SYSTEMS PROGRAMMERS

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For further information ring **(02403) 22201**
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ARc

Mastercare is Europe's largest Trade Service organisation and provides through its 41 Service Centres an increasingly diversified after-sales service for domestic appliances including microcomputers.

The Company is committed to a programme of expansion and is now in the process of installing a range of new systems that will provide the necessary support for this growth.

PROJECT LEADER

c.£14,000 + car

An experienced Project Leader is required to manage the design and implementation of a new generation of systems that will interface with our national Honeywell network. Applicants should be graduates in a numerate discipline and have had a background in systems analysis and design.

Experience of working in a service industry environment would be an advantage but the key attribute that we are looking for is a good track record in completing projects to time and budget.

Prospects of promotion within the group are excellent.

The total remuneration package includes the usual large company benefits, a profit-sharing scheme and assistance with relocation expenses.

Telephone for application form (9 a.m. – 5 p.m.) or write with your c.v. to:-

Roy Sullivan,
Company Personnel Manager,
CGS Limited, 653 London Road,
High Wycombe, Bucks HP11 1ER
Tel: 0494 21200

Big in benefits. Big in service.

MASTERCARE

RPGII/RPGIII Programmer

Westland Helicopters, one of Europe's leading Helicoptar Manufacturers, who are based in one of the most delightful areas of Somerset, require a person with at least 2½ years experience of RPG programming on IBM S/34 and/or IBM S/38 equipment.

The hardware currently installed is a 606mb/2048K S/38 Model 5 and a 192mb/128K System 34 with an extensive local and remote communications network, including an on site IBM Mainframe Link. Applications in the use of this facility are almost exclusively of a financial nature and experience in this area would be advantageous.

In addition to competitive salaries and a wide range of Company benefits, we can offer an attractive relocation package to this delightful part of the West Country.

Please apply in writing giving brief details of experience to date, age and current salary to Peter Hockley, Senior Personnel Officer, Westland Helicopters Limited, Yeovil, Somerset.

Westland-worth working for!

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LAST YEAR OUR

SALES EXECUTIVES

EARNED AN
AVERAGE INCOME OF

OVER £40,000

In fact, the top salesmen earned over £70,000!

If you look around you will see there are lots of job opportunities for experienced computer industry salespeople, but in reality they are no more than clones of each other, lost in the static survivet of the computer establishment or the transient euphoria of micro-computers. Many are acceptable to those already committed to changing employer, but after little incentive to those successful salespeople who would like to advance their careers if only the risk was not so profound. In contrast, this is one of those truly rare opportunities that must appeal to every accomplished saleaperson within the computer industry.

Consider the following facts:

* We dominate one of the fastest growing areas of computing.
* We have a reference client list that looks like a 'Who's Who' of British industry.
* We get so many enquiries, there is virtually no need for prospecting.
* We provide highly comprehensive pre- and post-sales support.
* Our continual investment in R & D keeps us far ahead of competition.

If you add to this the wide scope for personal advancement within our young and fast growing company, plus typical earnings that are almost double the industry average, and compare it with your present situation, you will surely forgive us for saying this is a very special opportunity indeed.

Success has now created additional job opportunities in

LONDON and the SOUTH
The MIDLANDS, NORTHERN ENGLAND

for experienced and well accomplished salespeople.

Applicants must have significant past or present experience of selling for a major mainframe or minicomputer manufacturer, or perhaps a large scale bureau specialising in engineering or industrial applications, ideally with experience of the manufacturing industry. Above all they must have the proven ability to negotiate high value sales at board level within major companies and institutions.

In return we offer on target earnings of £38,000 with a high minimum income guarantee for the first year of employment, plus a 2 litre company car and other fringe benefits including health insurance, pension, luncheon vouchers, etc.

Please contact Alasdair Scott (London) or Roger Dodd (Lichfield) quoting reference WSB/103. This is undoubtedly the best opportunity for advancing your career that is likely to be available for many months to come.

(6039)

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London W1. (01) 734 9776

MIDLANDS & NORTH
Cathedral House, Beacon Street,
Lichfield, Staffs. (05432) 66612

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SALES TRAINING, MARKET RESEARCH, RECRUITMENT

BOX NUMBERS

Box number replies should be addressed to:

Box Number .....

c/o Computer Weekly
Quadrant House
The Quadrant
Sutton, Surrey SM2 5AS

ANALYST/PROGRAMMER

Central Scotland – £8,500 to £10,500 p.a.

Our client, a multi-faceted and progressive organisation based in Central Scotland, has a need for a bright and innovative individual to take responsibility for the development and enhancement of a recently introduced computer system effecting several major areas of their operations.

Ideally, candidates will have experience of CMC/Microdata Reality or Sequoia systems, but a good all-round analyst/programmer with a feel for real-time computing in an on-line environment.

The successful applicant will have total responsibility for programming, systems analysis and design, enhancements, package installation, disk and file management, and perhaps most importantly, for liaison with a wide variety of users including the highest levels of management. Consequently, ability to stand, think, and get things done on your own two feet is essential.

An excellent benefits package is provided, and relocation assistance is available.

For further information telephone Jim Key on

031-226 5381

or write to him enclosing c.v. at

ATA Computer Recruitment
Anglia House, 26/28 Frederick Street, Edinburgh EH2 2JR

(6081)

ata

ANALYST/PROGRAMMERS

International

Interviews in Surrey on 20, 21 and 22 October

An American multi-national metal packaging manufacturer with its European Headquarters in Surrey seeks experienced data processing professionals to be based in the UK but who are willing to travel extensively in Europe. In return for flexibility and dedication, attractive salaries and benefits packages can be negotiated.

The environment is primarily IBM System 34s and 36s. Experience of COBOL and RPG are mandatory. International exposure and knowledge of other European languages would provide a significant advantage. Knowledge of accounting, manufacturing, inventory and distribution applications is desirable.

If you are a self-starter, can work with a minimum of supervision and are skilled in systems planning, requirements definition, specification preparation, system development and documentation and would like to be considered for these positions please contact Mrs Suzanne Birch on

Bracknell (0344) 55777 (day) 24117 (evng)

(6032)

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SALES EXECUTIVES

HELP US SELL A REVOLUTION!

If you know anything about the problems of enabling computers and peripheral devices to communicate, you will appreciate how difficult it can become when this is extended into a multi-vendor situation, particularly within a local or geographical networking situation. Few have been able to master the problems and only our client can be said to have found a complete solution. This has been achieved by developing a high performance networking system, operating at speeds of up to 50 million bits per second, which encompasses the protocols of most significant major mainframe, mini and microcomputer manufacturers. In other words, our client enables computers of virtually any manufacturer, involved in a diversity of applications, to intercommunicate within a communications network at channel speeds, whilst at the same time sustaining their own independance.

So much for the technology; the company is substantial, but relatively new in Europe, yet a world leader in its area of specialisation. So, here is a chance to be in at the early stages of an assured success. Already, many prestigious accounts have been secured and expansion is very rapid.

The requirement is for two salesmen located in

LONDON and the SOUTH

both of whom will be experienced in selling either substantial mini/mainframe computers, or large-scale communications systems to major companies and institutions. A proven record of success embracing both existing and new accounts selling involving DPM and board-level negotiations, is essential. Familiarity with data communications and real-time systems will be an advantage, but not a necessary qualification.

We are prepared to negotiate a minimum compensation package of around

£30,000 + COMPANY CAR

which will include a guarantee for the first 12 months of employment, at a level no less than current earnings, as well as providing fringe benefits such as Health Insurance, Pension and Life Assurance.

Please contact Alasdair Scott, quoting reference WSD/103.

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London W1. (01) 734 9776

MIDLANDS & NORTH
Cathedral House, Beacon Street,
Lichfield, Staffs. (05432) 56612

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Sound Attenuators Limited

COMPUTER MANAGER/ESS

A vacancy exists for a computer manager within a manufacturing environment. Suitable applicants could include experienced systems analyst/programmers looking for a more responsible position.

You will need a Cobol programming background and preferably have experience on NCR 1-Series equipment. We run on-line financial and manufacturing systems and there is lots of scope for development of current and new systems with the computer manager playing a key role.

Excellent conditions of employment with salary circa £10,000-£12,000 according to experience.

Contact Lynda Overton ext 234 at Sound Attenuators Ltd, Eastgates, Colchester CO1 2TW (0206 866911) or write for an application form.

(6112)

BOX NUMBERS

Box number replies should be addressed to:

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c/o Computer Weekly
Quadrant House, The Quadrant
Sutton, Surrey SM2 5AS

THE SERVICES SOUND AND VISION CORPORATION

PROGRAMMER

To meet our expanding computer installation we have a vacancy for a PROGRAMMER. Experience of Honeywell TPS and Screen write is essential; Cobol and online system experience would be an advantage. Working conditions are excellent.

Salary from £7,000 p.a.

Applications in writing are invited from Programmers with at least two years previous experience.

COMPUTER OPERATOR

required in our DATA CENTRE

The Services Sound and Vision Corporation has an immediate vacancy for a Computer Operator at the Chelfont Grove Headquarters.

He/She will be responsible to the Operations Supervisor for the operation of twin Honeywell Level Six Mini Computers. Shift working is required for which an allowance will be paid. He/She must have a background in computing preferably on the operations side. Duties will include System set-up, run scheduling, supervision of peripheral equipment documentation and liaison with system and programming staff.

Salary c.£5,500 p.a. plus shift allowance

Applications in writing with details of previous experience to address below.

For both positions a good pension and life assurance scheme is available, free lunches are provided and assisted travel is available also. Pleasant working environment.

Apply to:
Mrs A. R. Silva, Personnel Supervisor
The Services Sound and Vision Corporation
Chelfont Grove, Gerrards Cross, Bucks. SL9 8TN

(6098)

SALES BIT

Angling for profit is what it's all about

A FEW days ago, I had a telephone conversation with Bob Astley, managing director of Terminal Display Systems. He was kind enough to ring and say some nice things about my new book and ordered a copy for every member of his salesforce. Very gratifying and a little flattering!

During our conversation, Bob picked out an article on territory management that he had particularly enjoyed, "Every salesman should be a farmer", which uses the parallel of the farmer's responsibilities with those of the territory salesman.

He then went on to mention one of his own similes, which I found both interesting and pertinent, relative to the disciplines required within the selling process. He used that most popular of sports – angling – to demonstrate the need for salespeople to be well prepared and to give the job all the dedication it demands if success is to be achieved.

It is apparently a phenomenon of fishing matches that the favourite almost always wins and if he doesn't, he is always well among the leaders. True, some rank outsider can sometimes land an unusually big fish that completely upsets everyone's predictions, but not very often. Bluebirds are just as uncommon in fishing as they are in selling.

So the day before the match, the accomplished fisherman devotes a lot of time to preparation. He studies all the information he can find about the stretch of water he is about to address. He gets to know what fish to expect and their relative proportions, i.e. there's no point in specially baiting up for gudgeon if they represent only 1% of the known population. Neither is there much wisdom in tackling up for trout in a lake full of carp.

He finds out whether he has to deal with fast flowing or still water, how deep or how shallow, limited or ample bank space and so on. He then ensures he has the right tackle for the various possibilities he is likely to experience. Furthermore, he makes absolutely sure everything he needs is actually in his fishing basket.

He also makes sure he has the right clothing for the anticipated weather and that his car is fully prepared for the journey, or his travel arrangements are completed well in advance. After all, if he arrives too late for the match, he will automatically disqualify himself from participation, and ruin his chances of being a winner.

Match fishers have no control over the stretch of bank that is allocated to them, it's all a matter of what is pulled out of the hat. So, when the top anglers discover what stretch of water they have drawn, they immediately set about analysing it, not merely on the surface, but also is the depths. Flowing or still, open or shaded, mud or weed, deep or shallow? Then there is the weather, time of day, time of year. All have a direct bearing on the tackle and bait used and the method of fishing applied.

Having decided upon a plan of action, he puts it into effect, but he is ever mindful of the need to change his methods if circumstances demand it. Just because he was catching fish with a given bait in a particular location when he started out doesn't mean to say it will continue to give him success throughout the match.

Right from the very first moment his eye is on the float and that's where he keeps it. There might be a temptation to utilise his idle-back (rod-rest) when things get a bit quiet and lean back for awhile, but he knows that could be the very time when the best chances come along.

He appreciates that opportunity is unpredictable. He knows the difference between a nibble and a bite. So, when the fish takes the bait, he is ready for it. He has the skill and experience to judge the right time to strike. Sometimes he decides to take it early, on rare occasions he will take it late, but the possibility of not striking at all does not come into the reckoning.

There are times when everything goes right. From the very beginning he has the right tackle, the right bait, the right position, the right depth and very soon he has a quantity of fish that he knows from experience will be enough to win the competition.

But he doesn't stop at that point; he continues to fish as hard and as thoroughly as he can until the final whistle. His natural instinct is not to say "How much do I need to win?", but "How much can I achieve in the time available to me?".

He is never sure that he will be the absolute winner, but he is sure that his catch will be among the best. Probably he wins yet again, but despite the obvious pleasure of achievement, he is neither arrogant nor complacent

If his gaze is momentarily removed from his float, it is with a purpose. Are the circumstances changing? The weather/water conditions and such have a very significant bearing on fishing success and opportunity. He won't be too proud to see how other competitors are reacting to change and noting their relative success. Why reinvent the wheel?

Eventually, the competition comes to a close and the keep-nets are emptied and the contents are weighed. He is never sure that he will be the absolute winner, but he is confident that his catch will be among the best. Probably he wins yet again, but despite the obvious pleasure of achievement, he is neither arrogant nor complacent. He has learned the hard way that a top fisherman is only as good as his next victory.

Alan Williams

PUZZLE ANSWER

THERE were 140 children in all – 105 boys and 35 girls. The hunt was organised by one of the fathers, a systems analyst, and he naturally made sure the results would be of theoretical interest (at least to him) by hiding corresponding numbers of parcels – 105 red and 35 blue.

In the event, the boys found 56 red parcels and 21 blue ones. The girls found 28 red and seven blue. So 21 red parcels remained undiscovered.

PUBLIC SECTOR APPOINTMENTS

Coventry Lanchester Polytechnic

Computer Centre

Programmer/Advisers

£7,191-£8,712 or £9,060-£10,539

Required to work as members of a team developing the usage of the VOS operating system, X25 networking and similar software on the Polytechnic's Harris Computers.

Applicants should have a degree or equivalent in Mathematics, Computer Science or other relevant discipline, and have experience in a scientific, technological or commercial field. Arrangements for research towards a higher degree can be made.

Details from: Assistant Personnel Officer, Coventry (Lanchester) Polytechnic, Priory Street, Coventry CV1 5FB. (Please enclose a large self-addressed envelope.) Closing date, Friday, November 4th, 1983.

An Equal Opportunity Employer

(6094)

Financial Controller's Department

SYSTEMS MANAGER – IBM 38
£9,945-£10,539 PER ANNUM

Applications are invited for the above post from experienced Analyst Programmers to assume project responsibility for a variety of new applications being implemented on an IBM System 38. Applicants should have a minimum of four years' experience in RPG.

Benefits include flexible working hours, superannuation scheme, relocation expenses totalling approximately £1,900 and a casual user car allowance.

CLOSING DATE: 7th November, 1983.

(6081)

Application forms from
The Personnel Section, Whitehall, Hartford
Northwich Cheshire CW8 1PJ (0606 74477)
VALE ROYAL DISTRICT COUNCIL

SHEFFIELD CITY POLYTECHNIC
COMPUTER SERVICES DEPARTMENT
STAFF USER EDUCATION

The primary role is to give short courses, seminars and workshops to Polytechnic staff; to describe the services and facilities available on both the IBM 4341 mainframe (VM/CMS) and micro computers.

In addition to this staff development function, the post holder will be responsible for the development of publicity material, liaising with users and the practical development of Computer Aided Instructional Material.

Salary Scale – Senior Lecturer – £10,683-£12,652 (bar) – £13,443.

Application forms and further details are available from the Personnel Officer (Dept. CW), Sheffield City Polytechnic, Halfords House, 14 Fitzalan Square, Sheffield S1 2BB, tel. (0742) 20911 ext 387. Closing date 28th October.

Sheffield City Polytechnic is an Equal Opportunities Employer.

(6118)

COUNTY TREASURER'S DEPARTMENT

The County Council with offices in Barnsley have two 2966 4 MB ICL Computer Systems supporting considerable real-time, remote batch and conventional batch processing running under DME/G3 operating system.

Work is currently in hand to introduce message routing software on the 7906 FEP to give terminal access to both systems.

Applications are invited from suitably experienced persons for the following post:

Systems Analyst

Grade Sc5/6 — POST REF: T251 — Salary £7,191-£8,712

Applicants should have wide technical experience preferably using data base techniques. The successful applicant will be involved in the development of a wide range of systems for all departments of the County Council on both mainframe and mini/micro computers (whichever is the best medium).

The County Council operates a system of flexible working hours and payment of removal expenses, lodging and travelling allowances will be made in appropriate cases.

Please write for an application form, quoting the post reference, to the Chief Executive (Personnel), South Yorkshire County Council, County Hall, Barnsley S70 2TN or telephone Barnsley (0226) 86141 Ext. 266.

Closing date for applications will be 31st October, 1983.

South Yorkshire County Council is an Equal Opportunities Employer.

South Yorkshire County Council

(5975)

National Heart and Chest Hospitals
Brompton Hospital

Brompton Hospital is a 320-bed postgraduate teaching hospital specialising in cardiac and respiratory care. A comprehensive patient administration and information system is being developed on linked Prime and DEC equipment.

There are two vacancies for a

SYSTEMS DESIGNER/ PROGRAMMER

The first post is to implement a computerised laboratory reporting service for the Department of Pathology. This will be on a PDP11/34 system running under MUMPS and will involve direct links to analytical laboratory instruments as well as handling on-line enquiries from ward and out-patient areas via the Prime system. The successful applicant will be required to evaluate existing packages and be responsible for their subsequent installation, adaptation and enhancement.

The applicant will take responsibility for all aspects of the service provided to the hospital by the DEC equipment and will manage the day-to-day running of this part of the system. Although experience of MUMPS and medical laboratory practice would be an advantage this is not essential.

The second post is to design and implement a computerised system for patient management and control of clinical trials. This is a joint appointment with the Department of Thoracic Medicine and is for one year in the first instance with the opportunity of extension. The successful applicant will be required to produce a detailed specification and be responsible for its subsequent design and implementation. The work will be carried out on the hospital's Prime 750 computer using Prime INFORMATION database management. Experience of this or any modern structured language is required.

Both postholders will be encouraged to make an active contribution to the development of computing within the hospital as a whole. Previous computing experience in a service environment involving direct contact with users at a variety of levels would be desirable. Applicants should possess a relevant degree or equivalent qualification.

Salary for both posts in the range £8,401-£10,022 inclusive of London Weighting.

Application forms and job descriptions available from Miss J. A. Jenks, Personnel Manager, Brompton Hospital, Fulham Road, London SW3 6HP. Tel: 01-352 8121, ext. 4367. Closing date 2nd November, 1983.

(6097)

UNIVERSITY COLLEGE LONDON
and
LH FERMENTATION

Teaching Company Associate

SOFTWARE DEVELOPMENT

The Department of Chemical and Biochemical Engineering and LH Fermentation have a project, from the Science and Engineering Research Council and the Department of Trade and Industry, to design and develop software for the control and analysis of fermentation processes.

Approximately 80% of the Associate's time will be spent at LH Fermentation, and the post is expected to lead to an accelerated career development with the company at the end of the project.

Applications are invited from exceptional candidates, aged under 30, with a good honours degree in Computer Science or equivalent formal training. No knowledge of fermentation is necessary, but experience with FORTRAN 77 and real-time operating systems would be advantageous. As the post will lead to a position of responsibility within the company, in addition to software development skills, the candidate must be capable of good project management and demonstrate communicative skills. Salary commensurate with quality and experience will be up to £12,000.

Applicants should send a *full curriculum vitae* to: Dr N. M. Fish, Department of Chemical and Biochemical Engineering, University College London, Torrington Place, London WC1E 7JE.

(6140)

University of Glasgow Department of Electronics and Electrical Engineering

Programmer for GEC 4070 Mini-Computer

A GEC 4070 multi-user mini-computer has been installed by the Science and Engineering Research Council within the Faculty of Engineering, University of Glasgow. This computer forms part of a national network, providing interactive computing facilities for engineering research. An applications Programmer/Adviser is required to assist members of various groups with the development of programs and to liaise with SERC staff at the Rutherford Appleton Laboratory, who are responsible for the system software mounted on the 4070 computer. Applicants should have an Honours degree in an appropriate subject – Engineering, Mathematics, Physics, Computing Science. Salary will be within Grade 1A of the Other-Related Staff Salary Scales £7,190-£12,615, with placement according to age, qualifications and experience. Further particulars may be obtained from Dr P. J. R. Laybourn, Department of Electronics and Electrical Engineering, The University, Glasgow G12 8QQ to whom applications (two copies) should be addressed giving the names and addresses of at least two Referees. Closing date: 14th November, 1983.

In reply please quote Ref. No. 5160F.

(6128)

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MANSFIELD DISTRICT COUNCIL
Finance Department

COMPUTER MANAGER

Grade PO1 (5-9) (Scp 38-42)
£11,052-£12,408 per annum

The District Council is currently in the process of upgrading its IBM 4331, DOS/VSE, CICS/VS, DL/1 to an IBM 4361, VM, DOS/VSE, CICS/VS, DL/1 equipment and systems.

The postholder is responsible for overseeing the Council's computer operation and, to reflect the importance of the computer within the organisation, will report directly to the Chief Executive Officer on policy liaison matters.

It is considered that the post will afford the successful candidate a challenging and rewarding opportunity, through involvement at a senior level, during a period of considerable change in the Council's computer strategy.

A Casual User Car Allowance is payable. Assistance with housing will be given in approved cases.

Application form and job description may be obtained from the undersigned and should be returned to him to arrive not later than Monday, 31st October, 1983.

Canvassing will disqualify.

J. D. ELLSEY
Head of Personnel
and Management Services

Carr Bank,
Mansfield, Notts.
Tel: Mansfield 22561. Ext. 269.

Nene College Northampton

Computer Services

Documentation Officer

Scale 3 — Salary: £5640-£6135 p.a.

As part of a three-year development plan, the College is installing a new Digital VAX 11/780 computer and expanding support services to users. A new post has arisen in Computer Services for a Documentation Officer who will be responsible for the documentation produced and held by Computer Services and other related aspects. Word processing, graphics techniques and other technical skills need to be developed.

A prior knowledge of computers and technical writing, newsletter production or publicity will be an advantage.

Application form and further details from: The Deputy Senior Administrative Officer, Nene College, Moulton Park, Northampton. Tel. Northampton 715000. Closing date for applications is two weeks from the date of this advertisement.

TEESSIDE POLYTECHNIC
Department of Computer Science

Applications are invited for a post of

GRADUATE RESEARCH ASSISTANT

to work on a project funded by British Telecom to investigate the use of Expert Systems in a Software Engineering context.

The project is initially funded for one year to commence as soon as possible but may be extended to British Telecom's option. The appointee will be encouraged to register for a higher degree.

Applicants should be good honours graduates in Computer Science or a related discipline, and a knowledge of Artificial Intelligence or IKBS would be particularly useful.

Salary: £6,849-£6,383 per annum.

Application forms and further particulars from: Personnel Section, Teesside Polytechnic, Borough Road, Middlesbrough, Cleveland TS1 3BA, Telephone Middlesbrough (0642) 218121, Extension 4114.

Information enquiries to: Mr W. J. Black, Extension 4262 or 4363.

Closing date for applications: 4 November 1983

Highways and Transportation Department

The following staff are required for the Computer Unit in the Traffic Systems Group. The unit operates a SEL 32/7760, 2 PDP 11/30 mini computers as well as micro-computers and provides support for the County Council's world renowned Urban Traffic Control system as well as general computer support for a wide variety of applications in the Transportation Branch of the Department.

Computer Manager

£9,945-£11,703 to head the Unit. Applicants must have proven management abilities as well as a good analyst/programmer background. Experience in database technology and/or computer graphics would be an advantage. (Ref: W.R. 40).

Assistant Analyst/ Programmer

£5,493-£9,660. Applicants must have a good working knowledge of FORTRAN and BASIC. (Ref: W.R. 78/79).

Details from Mr M. Bourner, Traffic Systems Manager, on Maidstone 671411 ext. 3824.

Further information and application forms, returnable by 28 October, from the County Surveyor, Sandling Block, Springfield, Maidstone, 'phone 671411 ext. 3752.

Interviews to be held on 9 and 10 November, 1983.

KENT COUNTY COUNCIL

Can you perform in our Marketing Band?

Promotions and business development have created absorbing new openings at Digitus, the UK's leading microsystems house. We need energetic women and men to take places in our sales, marketing and technical support group.

Product Managers

Can you take responsibility for a hardware and software product line? Provide solutions in personal computing, wordprocessing, office automation, commercial or vertical markets? Deal with suppliers, generate leads, qualify prospects, arrange demonstrations, prepare quotations? Close business? Research new products, organise mailings, develop major accounts? Take responsibility for a budget? These are some of the tasks product managers are involved in, channelling the world's leading hardware and software into fulfilling systems for customers.

Sales Supporters

Perhaps you want to move into sales and could start in sales support? Do you like dealing with lots of customers? Analysing requirements, developing demonstrations, putting bids together? Do you get a buzz from being part of a winning sales group? And take satisfaction from installing working systems? These are some of the qualities we seek in sales supporters and future product managers.

Public Relations Plus

Can you produce press releases and press events? Arrange product launches and exhibitions? Develop advertisements and newsletters? Write lucid copy for sales aids, brochures and mailshots? Participate in marketing plans and presentations? Digitus has a wealth of stories and services to communicate, and we need a Marketing Executive to help develop and promote them. Experience in journalism together with knowledge of public relations, advertising or computing will be important plus points for this position.

A background in mainframes, minis, wordprocessors or micros is essential; experience of CP/M, MS DOS or UNIX based software an asset, but above all *we need people with the drive to* perform in the competitive world of micro technology. Attractive remuneration packages and development opportunities are associated with these positions. To apply call for further information or write enclosing a detailed CV to Alan C. Wood, Managing Director, Digitus Limited, 10/14 Bedford Street, Covent Garden, London WC2E 9HE. Tel: (01) 379 6968.

Digitus

(6028)

Are you just the TECHNICAL SUPERVISOR we are looking for?

(M/F)

Computer Disc Memory Technology — Belgium

Our Client, a small production unit, is a subsidiary of a very successful international company which has retained its human dimension. Its activities are concentrated within a very sophisticated field of advanced technology. The amazing development of the market for this particular branch of technology has necessitated the immediate engagement of three young executives to be responsible for the supervision of the Quality Control, the Manufacturing and the Research & Development departments. They should have a good qualification in electronics and/or 2-3 years experience in the manufacture of memory discs. Alternatively, complete familiarity with Winchester technology would be ideal. These executive positions could be just the right stepping stone to a career in Technical Management for those motivated to succeed. This means candidates should be well qualified technically and have a very good knowledge of English. Knowledge of French and Dutch would also be appreciated. Ambition is the key word in these positions and accordingly our Client will only be looking at candidates with dynamic personalities. Who are capable of achieving results and who can be creative. The successful candidates will be closely associated with the management and development of a new project which will bring great professional satisfaction. The remuneration package is particularly interesting and future prospects are bright for those with ambition and who are willing to invest the appropriate effort for the future development of their career.

Should the requirements for these challenging positions match your personality and future career plan, please send us your application, including full details and two recent photographs, quoting the reference 10/24/TS. A preliminary interview will then be arranged with the Consultant responsible for this brief. A reply will be sent to all applicants. The initial interviews will be held in Brussels, Paris and London.

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(6045)

INTERNATIONAL BANKING
OFFICE AUTOMATION

SYSTEMS PROGRAMMER
up to £15K

Lloyds Bank International Limited is to develop an advanced multi-function workstation for use in its branches in London and overseas. The project offers an opportunity for a mini or micro-computer specialist to become involved in this interesting and rewarding development.

The ideal applicant will have at least 5 years' development experience in some relevant fields such as

- ☐ operating systems,
- ☐ local area networks,
- ☐ office automation and communications,
- ☐ 'C' language or similar
- ☐ Unix or an equivalent

This appointment to our U.K. based staff located in the City carries substantial fringe benefits including advantageous loan facilities, free lunches and a non-contributory pension scheme.

Please telephone Simon Wootton on 01-248 9822 Extension 3694 for an Application Form and further details.

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